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By Hand

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United States District Court
District of Delaware
844 N. King St.
Wilmington, DE 19801

Re: ArthroCare Corporation v. Smith & Nephew
C.A. No. 01-504 (SLR)

Dear Dr. Dalleo:

Enclosed are an original and copy of ArthroCare's Corrected Answering Brief In Opposition To Smith & Nephew's Opening Brief In Support Of Its Inequitable Conduct Case. This corrected brief contains corrections to certain case citations, as well as a corrected Table of Contents and Table of Authorities.

Respectfully,

Karen Jacobs Loudon
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/cbl

cc: William J. Marsden, Jr., Esq. (w/enc.) (by hand)
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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

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ARTHROCARE CORPORATION,)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 01-504 (SLR)
)	
SMITH & NEPHEW, INC.,)	
)	
Defendant.)	

**ARTHROCARE'S CORRECTED ANSWERING BRIEF IN
OPPOSITION TO SMITH & NEPHEW'S OPENING BRIEF
IN SUPPORT OF ITS INEQUITABLE CONDUCT CASE**

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NATURE AND STAGE OF THE PROCEEDING

Plaintiff ArthroCare Corporation ("ArthroCare") filed this action on July 25, 2001, alleging infringement of United States Patent Nos. 5,697,536 ("the '536 patent"), 5,697,882 ("the '882 patent"), and 6,224,592 B1 ("the '592 patent"). Defendant Smith & Nephew, Inc. ("Smith & Nephew") asserted defenses of non-infringement and invalidity of all three patents, and unenforceability of the '592 patent for inequitable conduct. At the pre-trial conference, Smith & Nephew sought to assert an additional allegation of inequitable conduct with respect to the reexamination of the '536 patent.

The Court allotted each side 16 hours to present its case at trial, including any evidence relating to inequitable conduct. (Tr. at 107). Smith & Nephew used all of its 16 hours -- and an additional half-hour it requested (Tr. at 1287) -- during the seven-day jury trial. On May 12, 2003, the jury rendered a verdict that all of the asserted claims of the '536, '882, and '592 patents were infringed and not invalid. That same day, the Court denied Smith & Nephew's request for additional time to present evidence on inequitable conduct, but allowed Smith & Nephew to brief the issue on the record made at trial: "If you want to brief inequitable conduct on the record made at trial, you certainly may. But we are not going to open the record for purposes of inequitable conduct." (Tr. at 1702.)

On June 9, 2003, Smith & Nephew filed its Opening Brief in Support of Its Inequitable Conduct Case. That brief asserts ten new theories of inequitable conduct that Smith & Nephew had never previously asserted, including allegations of inequitable conduct relating to the '882 patent and allegations of infectious unenforceability. The brief also cites extensively to evidence that is not in the trial record.

There is no evidence -- much less clear and convincing evidence -- of inequitable conduct. Smith & Nephew cannot point to any material misrepresentations or omissions. To the contrary,

ArthroCare's patent attorneys -- John Raffle and Sanjay Bagade -- made full disclosures to the Patent Office, including disclosure of Smith & Nephew's invalidity contentions from this litigation during the '536 reexamination. Moreover, the record is completely devoid of evidence of intent to deceive. Accordingly, ArthroCare respectfully requests that the Court enter judgment of no inequitable conduct.

SUMMARY OF ARGUMENT

Smith & Nephew's allegations of inequitable conduct must fail for at least the following reasons:

1. The record at trial is entirely insufficient to support Smith & Nephew's inequitable conduct allegations. As a result, Smith & Nephew's "case" is based largely on speculation, unfounded inference, and attorney argument. The evidence simply does not clearly and convincingly show that those involved with patent prosecution withheld material information from the Patent Office, made material misrepresentations, or had any intent to deceive the examiners of the patents-in-suit.

2. In its Opening Brief, Smith & Nephew presents no less than 10 entirely new theories of inequitable conduct and relies on alleged evidence outside the trial record. Because these new allegations violate the Federal Rules of Civil Procedure, are unfair, and would cause ArthroCare extreme prejudice, and because ArthroCare had no opportunity to present evidence rebutting these new theories at trial, they should not be considered by the Court. Similarly, Smith & Nephew should not be permitted to rely upon evidence outside the trial record.

3. Smith & Nephew's allegations with respect to the '592 patent are contradicted by the evidence, are based upon impermissible inferences, and rely on the very same arguments regarding the materiality of the prior art that were explicitly rejected by the Patent Office, this

Court, and the jury. The Roos '198 patent cannot form the basis for an inequitable conduct charge because Mr. Raffle disclosed that reference to the Patent Office and Mr. Raffle was under no obligation to point out particular pages in the reference to the Examiner. Moreover, Smith & Nephew has not offered a shred of evidence that Mr. Raffle believed the arguments he made to the Examiner about the Roos '198 patent were false. Similarly, Smith & Nephew has not shown, and cannot show, that Mr. Raffle committed inequitable conduct with respect to Judge Orrick's interlocutory, preliminary injunction decision in the *Ethicon* case. Mr. Raffle identified the decision for the Examiner, described it as one of the documents that reflected the parties' primary validity and enforceability positions, and offered to provide a copy to the Examiner. These facts undercut any argument that ArthroCare intended to deceive the Patent Office.

4. Smith & Nephew complains that it was inequitable conduct for ArthroCare not to disclose certain of Smith & Nephew's papers from this lawsuit (summary judgment briefs, Taylor expert report, Roos declaration) during the '536 reexamination. These documents, however, were merely litigation-motivated "explanations" of prior art references and contentions, all of which ArthroCare had provided to the examiner. As such, the documents were not material and were cumulative to submitted information. Moreover, there is no evidence that anyone involved with the '536 reexamination had possession of these documents, thereby undermining Smith & Nephew's charge that they were improperly withheld.

5. Smith & Nephew's allegations regarding the '882 patent's Certificates of Correction seek to transform mere clerical and typographical errors into fraud on the Patent Office. The jury found that the errors in the claims as originally issued were clerical or typographical. As a result, corrections to those errors that broadened the claim were perfectly proper. Moreover, changing "active electrode" to "electrode terminal" simply is not material,

because the Court's construction of those terms and the testimony at trial demonstrates that the terms are used interchangeably. Smith & Nephew's argument that Mr. Raffle was motivated to change "active electrode" to "electrode terminal" in order to cover Ethicon's product is unfounded. Not only is there no evidence supporting it, but it is inconsistent with the fact that Mr. Raffle did not correct another claim that contained the same error.

6. Smith & Nephew's new charges of infectious inequitable conduct fall well short of the legal standard required to render the patents-in-suit unenforceable. Smith & Nephew has not established an immediate and necessary relation between the alleged inequitable conduct with respect to any patent and enforcement of any other patent. Nor do Smith & Nephew's allegations of inequitable conduct rise to the level of unconscionability required to support infectious unenforceability. Moreover, Smith & Nephew offers no support for its theory that later acts of alleged inequitable conduct can retroactively infect previously issued patents.

STATEMENT OF FACTS

The relevant facts are set forth in the Argument sections, as appropriate.

ARGUMENT

I. SMITH & NEPHEW'S NEW INEQUITABLE CONDUCT ALLEGATIONS AND RELIANCE ON EVIDENCE NOT IN THE RECORD SHOULD BE REJECTED.

Smith & Nephew first pleaded its inequitable conduct defense in its September 13, 2001 Answer and Counterclaims. (D.I. 10.) That defense consisted of only two allegations -- both directed solely to the '592 patent. The first was that the applicants did not tell the Examiner that claim 1 of the Roos '198 patent disclosed the use of electrically conductive fluid. (D.I. 10 ¶¶ 15-26.) The second was that the applicants did not tell the Examiner that Judge Orrick had found that the Roos '198 patent disclosed the use of conductive fluid in his December 2, 1998 Memorandum in the *ArthroCare v. Ethicon* litigation. (*Id.*)

On March 26, 2003, some five months after fact discovery closed, Smith & Nephew supplemented its response to ArthroCare's interrogatory that sought the bases for Smith & Nephew's inequitable conduct contentions. In doing so, Smith & Nephew added the new assertion that, during the reexamination of the '536 patent, ArthroCare committed inequitable conduct by not submitting to the Patent Office Smith & Nephew's invalidity expert reports and summary judgment briefs from this litigation.

On June 9, 2003, four weeks after the end of trial, Smith & Nephew submitted its Opening Brief, which includes ten new allegations of inequitable conduct that were never raised before or during trial:

- With respect to the '592 patent, Smith & Nephew claims that Mr. Raffle committed inequitable conduct by failing to disclose that the Roos article described the use of one of the devices disclosed in the Roos '198 patent in 32 successful surgeries and that the Roos article explicitly described the irrigation liquid as facilitating the passage of electrical current. (D.I. 442 at 16.)
- With respect to the '592 patent, Smith & Nephew claims that Mr. Raffle committed inequitable conduct by not telling the Examiner that Judge Orrick had previously rejected ArthroCare's arguments on the Roos '667 patent. (D.I. 442 at 16.)
- With respect to the reexamination of the '536 patent, Smith & Nephew claims that ArthroCare committed inequitable conduct by failing to disclose the Roos Declaration. (D.I. 442 at 3, 21.)
- With respect to the reexamination of the '536 patent, Smith & Nephew claims that Mr. Raffle convinced the Examiner to simply parrot back arguments that Mr. Raffle had previously made with respect to the Roos '198 patent during prosecution of the '592 patent without performing any independent analysis. (D.I. 442 at 4, 21-22.)
- With respect to the '882 patent, Smith & Nephew claims that Mr. Raffle committed inequitable conduct by falsely asserting that "[a]pplicant amended all of the claims to replace the term 'active electrode' with 'electrode terminal.'" (D.I. 442 at 29-31.)

- With respect to the '882 patent, Smith & Nephew claims that Mr. Raffle committed inequitable conduct by failing to point out that there were other instances where there was an improper antecedent basis that was purportedly acceptable to ArthroCare. (D.I. 442 at 31-32.)
- With respect to the '882 patent, Smith & Nephew claims that Mr. Raffle committed inequitable conduct by failing to explain that the Certificate of Correction would broaden the scope of claim 1. (D.I. 442 at 32-35.)
- Smith & Nephew claims that ArthroCare's supposed inequitable conduct with respect to the '592 patent renders the '882 and '536 patents unenforceable because the alleged misrepresentation about the significance of the Roos '198 patent to the '592 patent makes it less likely that the '882 and '536 patents will be subject to reexamination, and has the potential to taint the reexamination of the '882 and '536 patents. (D.I. 442 at 38.)
- Smith & Nephew claims that ArthroCare's failure to provide Smith & Nephew's litigation-related documents in the '536 reexamination renders the '592 and '882 patents unenforceable because those documents provide information concerning prior art references that are material to the '592 and '882 patents. (D.I. 442 at 39.)
- Smith & Nephew claims that ArthroCare's inequitable conduct with respect to the '882 certificates of correction infects the '592 and '536 patents because all three patents use the terms "active electrode" and "electrode terminal." (D.I. 442 at 39.)

In addition to asserting entirely new inequitable conduct allegations, Smith & Nephew also relies extensively on documents that are not in the trial record, *e.g.*, Judge Orrick's opinion, Smith & Nephew's expert reports, and the Roos Declaration.

The Court should not permit Smith & Nephew to assert any of these new inequitable conduct allegations. Allowing Smith & Nephew to make these new arguments post-trial would be extremely prejudicial to ArthroCare. It is beyond dispute that ArthroCare did not receive any notice of these theories before or during trial. As a result, ArthroCare had no opportunity to introduce evidence at trial to rebut them. This is exactly the kind of prejudice the Federal Rules of Civil Procedure are designed to prevent. *See ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 550-51

(Fed. Cir. 1998) (affirming trial court's exercise of discretion to preclude accused infringer "from relying on theories not made available or not disclosed to the opposing side"); *Commissioner v. Transport Mfg. & Equip. Co.*, 478 F.2d 731, 736 (8th Cir. 1973) (affirming exclusion of theories first raised in post trial briefs due to surprise, disadvantage, and substantial prejudice to defendant).¹

Smith & Nephew's claim that "[t]he issues related to the '592 and '536 patents were previously pled" (D.I. 442 at 3) is simply incorrect. It is well-established that inequitable conduct must be pleaded with particularity under Federal Rule of Civil Procedure 9(b). "Thus, in pleading an inequitable conduct claim, a party cannot merely rely on vague allegations that broadly recite the elements of fraud, but instead must either specify the time, place, and content of any alleged misrepresentations made to the PTO or otherwise 'give the [opposing party] notice of the precise misconduct alleged.'" *Agere Sys. Guardian Corp. v. Proxim, Inc.*, 190 F. Supp. 2d 726, 734 (D. Del. 2002) (citing *EMC Corp. v. Storage Tech. Corp.*, 921 F. Supp. 1261, 1263 (D. Del. 1996)). Before trial, Smith & Nephew asserted only three allegations of inequitable conduct with any specificity – two in its Answer and one in its supplemental interrogatory response. Smith & Nephew's remaining allegations concerning the '592 and '536 patents were asserted for the first time nearly a month after trial in its Opening Brief.

Similarly, Smith & Nephew's claim that its inequitable conduct allegations concerning the '882 patent are based on the testimony that came out at trial (D.I. 442 at 3) is wrong. All of the facts upon which Smith & Nephew bases these allegations are found expressly in the

¹ Smith & Nephew has not made any showing that its new theories are proper under the Federal Rules of Civil Procedure. (D.I. 442 at 10 n.4.) Rule 15 requires a showing that justice requires the amendment to the pleadings and that ArthroCare will not be prejudiced – neither has been shown here. In addition, *Rhone-Poulenc Agro S.A. v. Monsanto Co.*, 73 F. Supp. 2d 537 (M.D.N.C. 1999), is inapposite. The pleadings there were amended at the close of discovery, not after trial.

prosecution history of the '882 patent. Mr. Raffle's and Dr. Goldberg's trial testimony did not add any additional facts beyond what was in the prosecution history. For example, Smith & Nephew supports its position by pointing to the testimony of Mr. Raffle regarding the replacement of "active electrode" with "electrode terminal" in claims 1 and 26. (D.I. 442 at 30-31.) Mr. Raffle's trial testimony, however, merely confirms the content of the prosecution history. Moreover, Smith & Nephew does not even argue that its new infectious unenforceability allegations were pleaded previously² or were based on "new evidence" discovered at trial.

In addition, Smith & Nephew's attempts to rely on documents that are not in the record – Judge Orrick's opinion, Dr. Taylor's expert report, and the Roos Declaration – should be rejected. Notwithstanding this Court's ruling that the trial record was closed on May 9, 2003, Smith & Nephew relies on seven exhibits not in the trial record. (D.I. 443, Exs. A, D, J, K, L, Q and R.) Those exhibits should not be considered. *See ATD Corp.*, 159 F.3d at 550-551 (the purpose of the patent law's notice requirements and of the Federal Rules "is to prevent unfair and prejudicial surprise, not to facilitate last-minute production of evidence"); *Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co.*, 163 F. Supp. 2d 426, 457 (D. Del. 2001) (deeming inequitable conduct defense waived because patentee was unable to present its evidence, noting that "[b]oth sides are entitled to present and rebut evidence on this issue"), *aff'd in part, rev'd in part on other grounds*, 308 F.3d 1167 (Fed. Cir. 2002).

² Like allegations of inequitable conduct generally, allegations of infectious unenforceability must also be pleaded with particularity under Rule 9(b). *See Ronald A. Katz Tech. Licensing, L.P. v. Verizon Communications Inc.*, No. Civ. A. 01-5627, 2002 WL 1565483, at *1-3 (E.D. Pa. July 16, 2002) (striking claim for infectious unenforceability for failure to plead with particularity under Rule 9(b)).

Smith & Nephew's new inequitable conduct allegations and attempts to rely on evidence not in the record should be rejected.

II. THERE IS NO EVIDENCE THAT ANY OF THE PATENTS-IN-SUIT WERE PROCURED THROUGH INEQUITABLE CONDUCT.

A. The Legal Standards For Inequitable Conduct.

"A party seeking to have a patent declared unenforceable has a heavy burden to meet." *Hoffmann-La Roche, Inc. v. Promega Corp.*, 323 F.3d 1354, 1359 (Fed. Cir. 2003). "Inequitable conduct requires misrepresentation or omission of a material fact, together with an intent to deceive the PTO. Both of those distinct elements must be shown by clear and convincing evidence." *Id.*

Inequitable conduct entails a two-step analysis. *Juicy Whip, Inc. v. Orange Bang Inc.*, 292 F.3d 728, 744 (Fed. Cir.), *cert. denied*, 123 S.Ct. 537 (2002). First, the accused infringer must present clear and convincing evidence that the misrepresented or omitted information is material and not cumulative to information already in the record and that the applicant acted with intent to deceive the Patent Office. *Id.* at 744. Even if there is clear and convincing evidence of both materiality and intent to deceive, there still may be no inequitable conduct. The court must then perform the second step of the analysis, which is to weigh "the materiality and intent in light of all the circumstances to determine whether the applicant's conduct is so culpable that the patent should be unenforceable." *Id.*

Information is not material if it is cumulative to information already provided to the examiner. *See Upjohn Co. v. MOVA Pharm. Corp.*, 225 F.3d 1306, 1312 (Fed. Cir. 2000) ("a reference need not be provided to the examiner if it is merely cumulative to or less material than other references before the examiner"). An accused infringer must do more than show materiality is "a debatable factual question," it must prove materiality of the withheld

information by clear and convincing evidence. *See Tegal Corp. v. Tokyo Electron Am., Inc.*, 257 F.3d 1331, 1349-50 (Fed. Cir. 2001), *cert. denied*, 535 U.S. 927 (2002) (affirming a finding of no inequitable conduct despite acknowledging “that whether the [withheld] reference is cumulative is a debatable factual question”). A determination of materiality “require[s] a detailed factual analysis of the relevance of the teachings of that reference both with respect to the claims of the patents-in-suit and with respect to the other prior art references that were before the examiner.” *Dayco Prods. v. Total Containment, Inc.*, 329 F.3d 1358, 1367 (Fed. Cir. 2003).

To prove intent to deceive, an accused infringer cannot simply point to an applicant’s failure to comply with Patent Office rules:

[T]he alleged conduct must not amount merely to the improper performance of, or omission of, an act one ought to have performed. Rather, clear and convincing evidence must prove that an applicant had the specific intent to accomplish an act that an applicant ought not to have performed, *viz.*, misleading or deceiving the PTO. In a case involving nondisclosure of information, clear and convincing evidence must show that the applicant made a deliberate decision to withhold a known material reference.

Molins PLC v. Textron, 48 F.3d 1172, 1181 (Fed. Cir. 1995). Although intent to deceive may be inferred, it must be inferred from the evidence – “[c]onjecture alone is not sufficient to show an intent to deceive to support the defense of inequitable conduct.” *In re Hayes Microcomputer Prods., Inc. Patent Litig.*, 982 F.2d 1527, 1546 (Fed. Cir. 1992). Intent to deceive cannot be inferred simply from the materiality of the withheld or misrepresented information.³ *See Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1358 (Fed. Cir. 2003) (“[M]ateriality does not presume intent, which is a separate and essential component of inequitable conduct.”);

³ Accordingly, Smith & Nephew’s argument that “[i]ntent may be inferred from clear materiality” (D.I. 442 at 8) is wrong. A case upon which Smith & Nephew relies, *Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.*, 267 F.3d 1370 (Fed. Cir. 2001), is to the contrary. There, the Federal Circuit emphasized that an inference of deceptive intent depends on the particular facts of the case. *Id.* at 1375-76.

Hoffmann-La Roche, 323 F.3d at 1359 (intent and materiality are “distinct elements,” both of which “must be shown by clear and convincing evidence”). Moreover, “[i]ntent to deceive cannot be inferred simply from the decision to withhold the reference where the reasons given for the withholding are plausible.” *Dayco*, 329 F.3d at 1367.

When assessing intent to deceive, a court must always consider evidence of the applicant's good faith. *Li Second Family L.P. v. Toshiba Corp.*, 231 F.3d 1373, 1381 (Fed. Cir. 2000), *cert. denied*, 533 U.S. 929 (2001). Indeed, evidence of good faith, such as disclosure to the Patent Office of the information in dispute, will rebut an inference of intent to deceive. *Akron Polymer Container Corp. v. Exxel Container, Inc.*, 148 F.3d 1380, 1384 (Fed. Cir. 1998).

In the absence of a threshold finding of either materiality or intent to deceive, no further analysis need be performed and the inequitable conduct allegation must be rejected. *Monon Corp. v. Stoughton Trailers, Inc.*, 239 F.3d 1253, 1261 (Fed. Cir. 2001); *Amgen*, 314 F.3d at 1358 (“[T]here must be some threshold showing of intent . . . ; we will not find inequitable conduct on an evidentiary record that is completely devoid of evidence of the patentee's intent to deceive the PTO.”)

The Federal Circuit has called the inequitable conduct defense “an absolute plague” on the patent system:

[T]he habit of charging inequitable conduct in almost every major patent case has become an absolute plague. Reputable lawyers seem to feel compelled to make the charge against other reputable lawyers on the slenderest grounds They get anywhere with the accusation in but a small percentage of the cases, but such charges are not inconsequential on that account. They destroy the respect for one another's integrity, for being fellow members of an honorable profession, that used to make the bar a valuable help to the courts in making a sound disposition of their cases, and to sustain the good name of the bar itself. A patent litigant should be made to feel, therefore, that an unsupported charge of “inequitable conduct in the Patent Office” is a negative contribution to the rightful administration of justice.

Burlington Indus., Inc. v. Dayco Corp., 849 F.2d 1418, 1422 (Fed. Cir. 1988). “[U]njustified accusations of inequitable conduct are offensive and unprofessional [and] should be condemned.” *Molins*, 48 F.3d at 1182. The Federal Circuit has even upheld an award of sanctions for multiplying the proceedings unreasonably and vexatiously by pursuing a baseless charge of inequitable conduct. See *Fiskars Inc. v. Hunt Mfg. Co.*, 221 F.3d 1318, 1328 (Fed. Cir. 2000), *cert. denied*, 532 U.S. 972 (2001). “Inequitable conduct charges are disfavored by this court” *Eaton Corp. v. Parker-Hannifin Corp.*, No. Civ. A. 00-751-SLR, 2003 WL 179992, at *1 (D. Del. Jan. 24, 2003).

Smith & Nephew’s unjustified accusations of inequitable conduct in this case are clear examples of why the courts disfavor such charges.

**B. There Is No Evidence That The ‘592 Patent Was
Procured Through Inequitable Conduct.**

ArthroCare’s counsel, John Raffle, filed the application that eventually issued as the ‘592 patent on June 16, 1998, and it was assigned to Primary Examiner Lee Cohen for examination. Along with the application, Mr. Raffle submitted an Information Disclosure Statement that disclosed a number of references, including the Roos ‘198 patent and the Roos article. (DTX 300-301, A-2, A-29-A-49.)⁴ On October 20, 1999, Mr. Raffle submitted a Supplemental Information Disclosure Statement to bring the *Ethicon* litigation and documents from that litigation to the Examiner’s attention. (DTX 300, A-3-A-12.) Mr. Raffle explained that he had recently been apprised by a third party of M.P.E.P. § 2001.06(c), that he had already submitted the prior art that was principally relied upon by the accused infringers in *Ethicon*, and that he was

⁴ Portions of the ‘592 prosecution history (DTX 300-302) are attached at Ex. A at pp. A-1-A-54, portions of the ‘536 reexamination prosecution history (PX 7) are attached at Ex. B, and portions of the ‘882 prosecution history (DTX 306) are attached at Ex. C at pp. C-1-C-17.

providing a list of materials from *Ethicon* that reflected the parties' primary invalidity and enforceability arguments (including Judge Orrick's interlocutory opinion at number 40). Mr. Raffle offered to provide the Examiner with any of the listed materials. (DTX 300, A-3-A-12.)

On February 20, 2000, Examiner Cohen issued a rejection of a number of the pending claims in the application based on the Roos '198 patent. (DTX 301, A-16-A-20.) Mr. Raffle responded on May 25, 2000, arguing that the Roos '198 patent did not disclose "electrically conductive fluid." (DTX 301, A-21-A-28.) Examiner Cohen then withdrew his rejection based on the Roos '198 patent (DTX 301, A-50-A-53), and ultimately allowed the application to issue as the '592 patent (DTX 301, A-54).

1. Mr. Raffle's submission of and arguments regarding the Roos '198 patent cannot constitute inequitable conduct.

Even though Mr. Raffle disclosed and submitted the Roos '198 patent to the Patent Office, Smith & Nephew contends that he deceived the Patent Office by arguing that the Roos '198 patent does not disclose the use of "electrically conductive fluid." According to Smith & Nephew, this argument is inconsistent with claim 1 of the Roos '198 patent, which states that an unspecified liquid "provide[s] electrical conductance." (D.I. 442 at 3, 11-15.) This argument fails for a number of reasons.

First, Smith & Nephew's argument relies upon a string of inferences that begins with its inference that because the Examiner stated "a conductive fluid *must* complete the current path," he necessarily found in his initial rejection that conductive fluid was inherently – not explicitly – present in the Roos '198 patent. (D.I. 442 at 11.) From this, Smith & Nephew infers that the Examiner did not actually review claim 1 of the Roos '198 patent because, otherwise, he "certainly would have referred to claim 1 of the Roos '198 patent as supporting his rejection."

(D.I. 442 at 12.)⁵ Smith & Nephew then infers that Mr. Raffle was aware of these “facts,” and that he took advantage of them. (D.I. 442 at 14.) This argument cannot succeed as a matter of law because a string of inferences is not clear and convincing evidence. See *FMC Corp. v. Manitowoc Co. Inc.*, 835 F.2d 1411, 1417 (Fed. Cir. 1987) (“An inference can and often must be drawn from established facts and direct proof of wrongful intent is not required, but *drawing an inference on an inference on an inference is not the role of the fact finder.*”) (emphasis added); *Fuji Photo Film Co. Ltd. v. Jazz Photo Corp., Inc.*, 173 F. Supp. 2d 268, 276 (D.N.J. 2001) (“a string of inferences of misconduct” is not clear and convincing evidence of inequitable conduct). The Federal Circuit has described as “absolutely accurate” a trial court’s statement that “a determination of ‘inequitable conduct’ may not be based on inferences.” *FMC Corp.*, 835 F.2d at 1417 n.11.

Second, Mr. Raffle did not misrepresent anything. The Roos ‘198 patent does not disclose the use of an electrically conductive fluid. Smith & Nephew’s argument to the contrary has been rejected by Examiner Cohen during the ‘592 prosecution, by Examiner Mendez and a board of primary examiners during the ‘536 reexamination, and by the jury at trial. Indeed, claim 1 of the Roos ‘198 patent was specifically cited three times during the ‘536 reexamination (in the request for reexamination and twice in Smith & Nephew’s invalidity contentions) (PX 7 at 25, 117, and 317) and extensively argued at trial. Nevertheless, neither the examiners nor the jury agreed that claim 1 disclosed an electrically conductive fluid.

⁵ This inference is clearly wrong. The Federal Circuit has held that “government officials are presumed to have properly discharged their official duties. If the references were in front of the examiner, it must be assumed that he or she reviewed them.” *In re Portola Packaging*, 110 F.3d 786, 790 (Fed. Cir. 1997) (internal quotation and citation omitted). Smith & Nephew’s reliance on *Bristol-Myers Squibb Co. v. Rhone-Poulenc Rorer, Inc.*, 326 F.3d 1226 (Fed. Cir. 2003), is misplaced. (D.I. 442 at 12, n.5.) In that case, the facts suggested that the entire reference was never before the Patent Office: “the file history [did] not contain a copy of the JACS article and the Examiner did not initial and date the listing of the article on the search report.” *Id.* at 1236.

As the evidence at trial -- particularly the cross-examination of Smith & Nephew's expert, Dr. Taylor -- established, the Roos '198 patent does not disclose the use of electrically conductive fluid:

- Both Dr. Taylor and Dr. Choti admitted that all fluids, whether electrically conductive or non conductive, will conduct some electrical current. (Tr. at 1338-40, 1342-43, and 735-36.) Thus, the language in claim 1 that the liquid "provide[s] electrical conductance" is perfectly consistent with the liquid being electrically non-conductive.
- The Roos '198 patent describes the admittedly non-conductive liquid used with the monopolar embodiment in the same way as it describes the allegedly conductive liquid used with the bipolar embodiments. This suggests that the liquid used with the bipolar embodiments also is non-conductive. (Tr. at 1343-44.)
- Figure 5 and col. 6:51-53 of the Roos '198 patent demonstrate that the invention requires contact between the return electrode and the tissue to ensure good electrical contact. This contact would not be required if the fluid were electrically conducting fluid. (Tr. at 1344-45.)
- The Roos '667 patent demonstrates that the washing liquid in the Roos '198 patent was not electrically conductive but instead required body secretions to make the fluid electrically conductive. (Tr. at 1361-66.)

Indeed, Smith & Nephew did not even assert the Roos '198 patent against the '592 patent at trial.⁶ (Tr. at 1728.)

Third, the fact that Mr. Raffle disclosed and distinguished the Roos '198 patent during prosecution of the '592 patent does not constitute inequitable conduct. ArthroCare disclosed the Roos '198 patent to Examiner Cohen and he was free to reach his own conclusions about what it disclosed. *See Life Techs., Inc. v. Clontech Labs., Inc.*, 224 F.3d 1320, 1326 (Fed. Cir. 2000) (finding no inequitable conduct as "the inventors merely advocated a particular interpretation . . .

⁶ Smith & Nephew points out that ArthroCare did not call an expert to rebut Dr. Taylor's testimony that the Roos '198 patent disclosed the use of electrically conductive fluid. (D.I. 442 at 13.) There was no reason for ArthroCare to call its expert, after Dr. Taylor's admissions on cross-examination.

which the Examiner was free to accept or reject" because the reference in question was disclosed to the Examiner); *Akzo N.V. v. U.S. Int'l Trade Comm'n*, 808 F.2d 1471, 1482 (Fed. Cir. 1986), *cert. denied*, 482 U.S. 909 (1987) ("The mere fact that [the applicant] attempted to distinguish [its] process from the prior art does not constitute a material omission or misrepresentation. The examiner was free to reach his own conclusion regarding the [] process based on the art in front of him."); *LifeScan, Inc. v. Home Diagnostics, Inc.*, 103 F. Supp. 2d 379, 386 (D. Del. 2000), *aff'd*, 2001 WL 345349 (Fed. Cir. Apr. 6, 2001) ("[T]he mere fact that a patent applicant attempts to distinguish its patent from prior art does not constitute a material omission or misrepresentation where the patent examiner has the prior art before him or her, and therefore, is free to make his or her own conclusions regarding the claimed invention.").⁷ Moreover, the Examiner's allowance over Roos and the jury's verdict that the patent was not invalid demonstrate that Mr. Raffle's statements were true. Where an applicant's statement distinguishing a reference is true and not misleading, it cannot provide the basis for a finding of inequitable conduct. *Wesley Jessen Corp. v. Bausch & Lomb, Inc.*, 209 F. Supp. 2d 348, 402 (D. Del. 2002), *aff'd*, 56 Fed. Appx. 503 (Fed. Cir. 2003).⁸

Fourth, Mr. Raffle had no obligation to point out claim 1 of the Roos patent, because he disclosed the entire Roos patent, including claim 1, to the examiner. Smith & Nephew points to no authority in support of its assertion. In fact, Federal Circuit law and a case Smith & Nephew

⁷ Examiner Cohen also was the primary examiner of the Roos '198 patent. (JTX 3 at 1, DTX 11 at 1.) Thus, Examiner Cohen was uniquely qualified to evaluate the Roos '198 patent and any relevance it might have to the '592 patent.

⁸ The fact that Smith & Nephew's attorneys interpret the Roos '198 patent differently than Mr. Raffle is no basis on which to charge inequitable conduct. *See SRI Int'l, Inc. v. Advanced Tech. Labs, Inc.* 127 F.3d 1462, 1466 (Fed. Cir. 1997) ("[Defendant's attorney] gives no evidence whatsoever to support this allegation [of inequitable conduct], other than the mere fact that his interpretation of the [] art differs from that propounded by [patentee] and accepted by the examiner at the reexamination proceeding. Such a difference of opinion is a slender reed on which to hang a very serious allegation.").

cites refute the assertion. See *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1582 (Fed. Cir. 1991) (rejecting argument that applicant's failure to point out the abstract of a prior art reference that was before the examiner was inequitable conduct); *Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 68 F. Supp. 2d 508, 546 (D.N.J. 1999), *appeal dismissed by* 232 F.3d 905 (Fed. Cir. 2000) ("I conclude that [defendant] has failed to set forth even a mildly tenable defense of inequitable conduct based upon [patentee's] submission of the [reference] to the USPO without highlighting the [particular portions]."). There is no requirement to explain the relevance of the prior art disclosed to the Patent Office. See *Fiskars*, 221 F.3d at 1327 ("[T]he earlier PTO requirement that the applicant explain the relevance of the references listed was removed in 1992."). As a result, "[a]n applicant cannot be guilty of inequitable conduct if the reference was cited to the examiner." *Fiskars*, 221 F.3d at 1327; *Scripps*, 927 F.2d at 1582 ("When a reference was before the examiner . . . it can not be deemed to have been withheld from the examiner.").

Fifth, there is no evidence – much less clear and convincing evidence – of any culpable intent. Smith & Nephew has presented no evidence suggesting that Mr. Raffle believed the Roos '198 patent disclosed electrically conducting fluid or that he intended to deceive the Patent Office. The absence of any evidence whatsoever from which one could infer intent requires a finding of no inequitable conduct. See *Amgen*, 314 F.3d at 1358 ("[T]here must be some threshold showing of intent . . . ; we will not find inequitable conduct on an evidentiary record that is completely devoid of evidence of the patentee's intent to deceive the PTO."); *Abbott Labs. v. TorPharm, Inc.*, 300 F.3d 1367, 1380 (Fed. Cir. 2002) (finding no inequitable conduct where the defendant failed to "explain how a fact finder could find the requisite intent to deceive the Patent Office, simply asserting in its reply brief that the intent to deceive may be inferred from

the omission alone").⁹ To the contrary, the evidence shows that Mr. Raffle acted in good faith by submitting the Roos '198 patent to the Patent Office where it was duly considered and formed the basis for an initial rejection of the claims of the pending application. (DX 301, A-29-A-39; Tr. 1531.)

2. Mr. Raffle's disclosure of Judge Orrick's opinion to the Patent Office cannot constitute inequitable conduct.

Smith & Nephew also argues that Mr. Raffle committed inequitable conduct during prosecution of the '592 patent by not submitting a copy of Judge Orrick's preliminary injunction opinion to the Patent Office. (D.I. 442 at 3, 15.) This argument also is unsupported.

First, Judge Orrick's opinion was not withheld from the Patent Office. Mr. Raffle disclosed the existence of the opinion to the Patent Office by including it in a list of materials from the *Ethicon* litigation, thus putting the Patent Office on notice of the reference.¹⁰ (DX 300, A-3-A-12). See *Akron Polymer*, 148 F.3d at 1383-84 (reversing a finding of inequitable conduct because the applicant did "disclose the existence of" the reference in question and "thus put the PTO on notice" of the disputed reference); *Dayco*, 329 F.3d at 1366 (applying an "inform [the Examiner] of the existence of the [reference]" standard). Mr. Raffle identified Judge Orrick's opinion in a list of documents that he described as reflecting the parties' primary validity and

⁹ Smith & Nephew claims that Mr. Raffle admitted that he "knew about the disclosure of electrically conducting fluid, i.e., 'liquid to provide electrical conductance,' in claim 1 of the Roos '198 patent, but did not tell the Examiner about what he knew." (D.I. 442 at 14.) Mr. Raffle did not admit he knew that claim 1 disclosed "electrically conducting fluid," but only that he knew that claim 1 said "liquid to provide electrical conductance." (Tr. at 1517.)

¹⁰ To the extent that Smith & Nephew's statement that "Mr. Raffle simply listed the opinion as the 40th in a list of 80 items" is suggesting that Mr. Raffle attempted to hide the opinion from the examiner, the suggestion is baseless. The reason the interlocutory opinion is listed 40th is because Mr. Raffle listed the materials from the *Ethicon* litigation in chronological order.

enforceability arguments, and offered to provide the Examiner with a copy of any or all of those documents. (DTX 300, A-3-A-12.)¹¹

Second, Smith & Nephew has not shown that Judge Orrick's opinion is material. Nor could it, because the Patent Office has made clear that Judge Orrick's preliminary, non-binding decision about the Roos '198 patent is not relevant to patentability. During the '536 reexamination, Mr. Raffle provided Judge Orrick's opinion to the Patent Office and disclosed Smith & Nephew's allegation that ArthroCare had committed inequitable conduct by not submitting that opinion to the Patent Office during prosecution of the '592 patent. (PX 7 at 83, 229.) Notwithstanding Judge Orrick's opinion and Smith & Nephew's allegations, a board of patent examiners found that the Roos '198 patent did not disclose the use of electrically conductive fluid. (PX 7 at 214-20.).

Moreover, Judge Orrick's opinion -- which is not even in evidence -- was a preliminary opinion not based on a complete record and simply found that the Roos '198 patent raised a substantial question of validity sufficient to deny a preliminary injunction. This Court previously has observed that the opinion is of little, if any, relevance:

But [Judge Orrick's opinion is] not relevant unless I in fact agree with the Judge, is it? If I think his determination of invalidity is off the wall, then it's not [relevant] -- I just am not confident that a preliminary determination by a judge and a party's reaction to it has any relevance to good faith or bad faith in bringing a patent case, because it is not binding. I just don't understand how it has any relevance.

(D.I. 49 at 38). When Smith & Nephew sought to use that opinion to seek discovery of ArthroCare's good faith basis for bringing this action (D.I. 47), the Court denied that request,

¹¹ By indicating that the listed materials reflected the parties' primary validity and enforceability arguments, Mr. Raffle provided the Examiner with enough information to allow him to evaluate the need to ask for the listed materials pursuant to M.P.E.P. 2001.06(c).

noting that “the relevance, if any, of a judge’s preliminary review of validity issues in the context of a preliminary injunction motion” was “far outweighed” by other considerations. (D.I. 53). Smith & Nephew moved for reargument on the ground that Judge Orrick’s opinion was “highly relevant” to ArthroCare’s good faith basis for bringing this lawsuit. (D.I. 62). This Court denied that motion as well, stating:

Given that the issue of validity will be tried in this court, and given the preliminary findings in unrelated litigation have no preclusive effect in the litigation at bar, the court finds defendants’ assertion [that Judge Orrick’s Opinion was relevant] to be, at best, hopelessly confusing to a jury and, at most, futile as unsupported by either the facts or the law.

(D.I. 141.) Indeed, the Court precluded Judge Orrick’s opinion from being used before the jury in this case. (D.I. 367 at ¶ 5.)¹²

Third, the record again lacks any evidence of intent to deceive the Patent Office, but instead demonstrates Mr. Raffle’s good faith. Mr. Raffle identified Judge Orrick’s opinion for the examiner, described it as a document that reflected the parties’ primary arguments, and offered to provide a copy to the examiner.¹³ See *Dayco*, 329 F.3d at 1366 (stating that “the

¹² The cases upon which Smith & Nephew relies on page 17 of its Opening Brief are inapposite. In *Newell Window Furnishings, Inc. v. Springs Window Fashions Div., Inc.*, 53 U.S.P.Q.2d (BNA) 1302 (N.D. Ill. Oct. 7, 1999), *aff’d in part, rev’d in part*, 2001 WL 744460 (Fed. Cir. Jul. 2, 2001), and *Golden Valley Microwave Foods, Inc. v. Weaver Popcorn Co., Inc.*, 837 F. Supp. 1444 (N.D. Ind. 1992), the patentees did not disclose even the existence of the litigation. In *Marlow Indus., Inc. v. Igloo Prods. Corp.*, 2007 WL 485698 (N.D. Tex. Mar. 28, 2002), *aff’d*, 2003 WL 21212626 (Fed. Cir. 2003), the patentee disclosed no information regarding the disputed claim construction opinion. In contrast, ArthroCare did disclose the existence of the *Ethicon* litigation and of Judge Orrick’s opinion.

¹³ Smith & Nephew’s assertion that Mr. Raffle did not disclose Judge Orrick’s opinion to the Patent Office in technical conformance with the M.P.E.P. is irrelevant. See *Hoffmann-La Roche*, 323 F.3d at 1377 (noting that failure to follow the M.P.E.P. or “negligence alone, even gross negligence, does not establish inequitable conduct”); *LNF Eng’g Plastics, Inc. v. Miller Waste Mills, Inc.*, 2000 WL 33341185 (D. Del. Aug. 8, 2000) (finding no inequitable conduct despite applicant’s failure to disclose a reference that formed the basis of foreign rejection as required by M.P.E.P. § 2001.06(a)), *aff’d*, 275 F.3d 1347 (Fed. Cir. 2001); *Duty of Disclosure*, 57 Fed. Reg. 2021, 2024 (Jan. 17,

requisite intent could not be inferred" because the applicant disclosed the reference); *Akron Polymer*, 148 F.3d at 1384 (disclosure of a reference "points away from an intent to deceive").

Smith & Nephew also contends that Mr. Raffle committed inequitable conduct by not telling the Examiner that Judge Orrick had previously rejected ArthroCare's arguments concerning the Roos '667 patent. (D.I. 442 at 16.) As discussed above, however, the opinion was adequately disclosed to the Patent Office, the Court has already observed that Judge Orrick's opinion is of little, if any, relevance, Judge Orrick's opinion was deemed not relevant by a board of examiners during the '536 reexamination, and there is only evidence of good faith given that Mr. Raffle disclosed both the Roos '198 and '667 patents to the Patent Office.¹⁴

3. Mr. Raffle's submission of the Roos article cannot constitute inequitable conduct.

Even though Mr. Raffle disclosed the Roos article to the Patent Office, Smith & Nephew argues that Mr. Raffle committed inequitable conduct during prosecution of the '592 patent by failing to disclose that the Roos article described the use of one of the devices described in the Roos '198 patent in 32 successful surgeries or that the Roos article allegedly described the irrigation liquid as facilitating the passage of electrical current. (D.I. 442 at 16.) Again, the record does not support Smith & Nephew's allegations.

1992) (the Patent Office "rules do not define fraud or inequitable conduct which have elements both of materiality and intent").

¹⁴ Smith & Nephew also argues that Mr. Raffle knew that the Roos article was more relevant to the Roos '198 patent than the Roos '667 patent. (D.I. 442 at 16.) There is no evidence that Mr. Raffle thought the Roos article was more relevant than the Roos '667 patent, and the evidence at trial shows that the Roos '667 patent was more relevant than the Roos article to the issue of whether the Roos '198 patent disclosed the use of electrically conductive fluid. (Tr. at 1359-69.) In any event, Mr. Raffle submitted all of these references to the Patent Office and the Examiner was free to draw his own conclusions. (DTX 301, A-29-A-44.)

First, Mr. Raffle disclosed the Roos article to the Patent Office, and he was under no obligation to point out any particular parts of that reference. *See Scripps*, 927 F.2d at 1582 (rejecting the argument that the applicant's failure to point out the abstract of prior art before the examiner was inequitable conduct); *Fiskars*, 221 F.3d at 1327 ("[T]he earlier PTO requirement that the applicant explain the relevance of the references listed was removed in 1992.").

Second, the fact that the device was successful in surgery does not mean that it used electrically conducting fluid. In fact, many prior art devices worked by using electrically non-conducting fluid. Dr. Taylor admitted at trial that glycine, an electrically non-conducting fluid, had been the conventional fluid used with devices such as that described in the Roos article. (Tr. at 1339-40.)¹⁵

Third, there is no evidence of any intent on the part of Mr. Raffle to deceive the Patent Office – only evidence of good faith. Mr. Raffle disclosed the Roos article to the Patent Office. Examiner Cohen indicated that he considered the article,¹⁶ and he was free to draw whatever conclusions he wanted to from it. Smith & Nephew's attempt to infer culpable intent, without probative evidence thereof, must fail. *See Multifarm Desiccants, Inc. v. Medzam Ltd.*, 133 F.3d 1473, 1482 (Fed. Cir. 1998) ("[I]nference without any probative evidence is insufficient to show culpable intent.").

¹⁵ The alleged materiality of the Roos article is further undercut by the fact that Smith & Nephew did not even argue the Roos article rendered the '592 patent invalid at trial. (Tr. 1728.)

¹⁶ Examiner Cohen put his initials next to the Roos article listed on Applicants' Form PTO-1449, demonstrating that he considered the reference. (DTX 301, A-29).

C. There Is No Evidence That Mr. Raffle Committed Inequitable Conduct During The Reexamination Of The '536 Patent.

A third party filed a Request for Reexamination of the '536 patent on December 23, 1999. (PX 7 at 5-19). That Request sought reexamination of the '536 patent based solely on the Roos '198 patent, and contained a detailed claim chart comparing claims of the '536 patent to the disclosure of the Roos '198 patent – including a quotation of that portion of claim 1 of the Roos patent upon which Smith & Nephew so heavily relies. (PX 7 at 25). The Request was assigned to Examiner Mendez, who granted it on February 2, 2000. (PX 7 at 64-65).

On October 12, 2001, Mr. Raffle submitted an Information Disclosure Statement, which disclosed the *Ethicon* litigation, the references (including the Roos article) principally relied upon by the defendants in *Ethicon*, and a list of materials from *Ethicon* that reflected the parties' primary invalidity and enforceability arguments. (PX 7 at 76-95). That Statement also disclosed this action, Smith & Nephew's allegation that during the '592 prosecution, ArthroCare should have pointed out Judge Orrick's opinion, and a list of the documents that included Smith & Nephew's primary invalidity and unenforceability arguments. (PX-7 at 83-84.) On June 6, 2002, Mr. Sanjay Bagade (another ArthroCare patent attorney) submitted a second Information Disclosure Statement disclosing Smith & Nephew's June 3, 2002 invalidity contentions (in the form of Smith & Nephew's responses to ArthroCare's contention interrogatories) and additional references. (PX 7 at 97-146.) Smith & Nephew's contentions included 36 pages of claim charts (PX 7 at 111-146) and specifically pointed out that portion of claim 1 of the Roos '198 patent upon which Smith & Nephew relies ("col. 7, lines 59-62") (PX 7 at 117).

On November 15, 2002, Examiner Mendez issued an Office Action which concluded that the Roos '198 patent did not render the '536 patent unpatentable. (PX 7 at 211-26.)

Specifically, Examiner Mendez stated that “[t]he arguments presented by the Request concerning the Roos ‘198 were addressed in a final decision by the examiner of record and reviewed by a board of primary examiners that convened to analyze the decision and make a final determination.” (PX 7 at 213.) Examiner Mendez and the board concluded that “[a]fter careful consideration and review of Roos ‘198, it is hereby found that Roos ‘198 does not anticipate or render obvious any of the independent claims of record” because the Roos patent never describes the use of “electrically conductive fluid.” (PX 7 at 214-20.) At the same time, however, the Examiner rejected claims of the ‘536 patent based on other references identified in Smith & Nephew’s invalidity contentions. (PX 7 at 220-26.)

On December 19, 2002, Mr. Bagade submitted a Response to the First Office Action, in which he argued that none of the references rendered claims of the ‘536 unpatentable. (PX 7 at 231-54.) At the same time, he submitted a third Information Disclosure Statement, attaching Smith & Nephew’s September 10, 2002 invalidity contentions, Smith & Nephew’s October 9, 2002 invalidity contentions, the file history of the Roos ‘198 patent, and additional references. (PX 7 at 290-562.) Those invalidity contentions contained another 37 pages of claim charts concerning the ‘536 patent. (PX 7 at 296-306, 308-09, 313-34, 336-37.) Mr. Bagade also submitted a Written Statement Per 37 C.F.R. § 1.560(b). (PX 7 at 228-230.) That Statement described various communications between the Patent Office and Messrs. Raffle and Bagade, and indicated that Mr. Raffle had provided a copy of Judge Orrick’s opinion to the Examiner. (*Id.*) Examiner Mendez never submitted any document correcting or supplementing the contents of the Statement.¹⁷

¹⁷ See M.P.E.P. § 713.04: Substance of Interview Must Be Made of Record (“It is the examiner’s responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.”).

On March 14, 2003, Examiner Mendez, Supervisory Patent Examiner Brian Casler, and Supervisory Patent Examiner Angela Sykes issued a Notice of Intent to Issue Ex Parte Reexamination Certificate. (PX 7 at 563-65.) That Notice states: "The examiner of record concurs with the arguments presented by the patent owner on paper number 15. Accordingly, it is concluded that claims 1-64 are allowable over the prior art of record." (PX 7 at 565.)

- I. Failure to disclose Smith & Nephew's immaterial and cumulative arguments regarding validity cannot constitute inequitable conduct.

Even though Messrs. Raffle and Bagade disclosed to the Patent Office three sets of Smith & Nephew's invalidity contentions and all of the references upon which Smith & Nephew relied, Smith & Nephew argues that ArthroCare committed inequitable conduct by failing to disclose Smith & Nephew's invalidity summary judgment briefs and Dr. Taylor's expert report on invalidity, none of which is of record. (D.I. 442 at 3, 21.) This allegation is totally lacking in substance.

First, Smith & Nephew's briefs and Dr. Taylor's report were not material because they were cumulative to the references therein and to Smith & Nephew's invalidity contentions that were already before the Patent Office. See 37 C.F.R. § 1.56 (stating that "information is material to patentability when it is not cumulative to information already of record or being made of record in the application . . ."). Smith & Nephew has not identified anything that its briefs or Dr. Taylor's report would have added to what was already disclosed in its invalidity contentions and references. See *Dayco*, 329 F.3d at 1367 ("Whether [a particular reference] meets the threshold level of materiality would require a detailed factual analysis of the relevance of the teachings of that reference both with respect to the claims of the patents-in-suit and with respect to the other prior art references that were before the examiner."); *Halliburton Co. v. Schlumberger Tech. Corp.*, 925 F.2d 1435, 1439-40 (Fed. Cir. 1991) (holding that the failure to disclose cumulative

references that were not more material than those that were cited to the examiner was not inequitable conduct).

Smith & Nephew's briefs and expert report were simply its arguments – not prior art, facts, or material information upon which the Patent Office properly bases its examination of patent applications. *See Aptix Corp. v. Quickturn Design Sys. Inc.*, 269 F.3d 1369, 1376 (Fed. Cir. 2001) (stating that the process creating the patent right “demands that all *facts* relevant to [patentability] . . . be submitted formally or informally to the Patent Office, which can then pass upon the sufficiency of the evidence”) (emphasis added); M.P.E.P. §§ 706 and 2001.

Moreover, the arguments in the briefs and report have been soundly rejected – the Court denied Smith & Nephew's summary judgment motions (D.I. 352, 354), and the jury rejected Smith & Nephew's invalidity arguments (D.I. 405 at 7).

Second, the evidence demonstrates only good faith, not intent to deceive. During the reexamination, Messrs. Raffle and Bagade disclosed to the Patent Office the existence of this litigation, Smith & Nephew's inequitable conduct allegation that during the '592 prosecution ArthroCare should have pointed out Judge Orrick's opinion, a list of documents containing the parties' primary validity and enforceability arguments, three sets of Smith & Nephew's invalidity contentions, the references upon which Smith & Nephew relied, and the file history of the Roos '198 patent. (PX 7 at 83-84, 97-146, 290-562.) *See Amgen*, 314 F.3d at 1357-58 (affirming finding of no inequitable conduct based on failure to disclose even the existence of pending litigation because there was no evidence of intent to deceive).¹⁸

¹⁸ Smith & Nephew's citation of *Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 68 F. Supp. 2d 508 (D.N.J. 1999), in support of its assertion that ArthroCare's "limited disclosure" of materials from this litigation demonstrates an intent to deceive is unavailing. (D.I. 442 at 28.) In that case, the patentee failed "to disclose to the USPO anything about the '778 Patent litigation except its mere existence and the fact that some of the prior art came from that litigation." 68 F. Supp. 2d at 551.

Aeroquip Corp., 733 F.2d 881, 888-89 (Fed. Cir. 1984) (inventor testimony may not be used to elaborate on the actual disclosure of a prior art reference); *Transclean Corp. v. Bridewood Servs., Inc.*, 290 F.3d 1364, 1372 (Fed. Cir. 2002) (same). In addition, the Roos Declaration is conclusory, unreliable hearsay. There is no indication, for example, of what definition of “electrically conducting fluid” Mr. Roos was using when he described the washing liquid as “electrically conducting,” or what the washing liquid was. To the extent he used the construction of that phrase proposed by Smith & Nephew, “any fluid that allows the passage of electrical current, such as blood and saline” (D.I. 270 at 11-12), it would not meet the Court’s definition of “electrically conducting fluid” on which the jury was instructed. Given its unreliability and lack of relevance, the Court excluded the Roos Declaration from use at trial. (D.I. 367 ¶ 9.)²¹

Second, as for intent to deceive, there is no evidence that Messrs. Raffle or Bagade had possession of the Roos Declaration during the ‘536 reexamination. *See FMC Corp.*, 835 F.2d at 1415. Smith & Nephew’s arguments to the contrary are not evidence.

3. Smith & Nephew’s accusations of improper conduct by Examiner Mendez, a board of examiners and Mr. Raffle are baseless.

Smith & Nephew’s final inequitable conduct argument with respect to the ‘536 reexamination is that “Mr. Raffle may have convinced the Examiner to simply parrot back arguments that Mr. Raffle had previously made with respect to the Roos ‘198 patent during prosecution of the ‘592 patent without performing any independent analysis.” (D.I. 442 at 3-4, 21-22.) This argument is absurd.

²¹ Smith & Nephew’s reliance on M.P.E.P. § 2258(I)(E) concerning affidavits and declarations is misplaced. (D.I. 442 at 24.) First, such affidavits are *permitted*, not required, to be submitted. Second, the M.P.E.P. makes clear that it is the reference, not the affidavit, that must form the basis for any rejection. *See* M.P.E.P. § 2258(I)(E) (“The rejection . . . cannot be based upon the affidavits or declarations as such, but must be based on the prior art or printed publications.”).

First, patent examiners are presumed to have performed their duties. *See Amgen*, 314 F.3d at 1327 (“We must presume the examiner did his job”); *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 939 (Fed. Cir.), *cert. denied*, 498 U.S. 920 (1990) (“It is assumed that public officials do their assigned jobs.”). With regard to the ‘536 reexamination in particular, Examiner Mendez must have reviewed the Roos ‘198 patent – the art that formed the sole basis of the request for reexamination – to determine whether it raised a substantial new question of patentability. *See* 37 C.F.R. § 1.515(a) (“[A]n examiner will consider the request and determine whether or not a substantial new question of patentability . . . is raised by . . . the prior art cited therein”); *Molins*, 48 F.3d at 1184 (assuming, absent proof to the contrary, that examiner considered reference submitted in reexamination that examiner had initialed).

Second, there is absolutely no evidence to support Smith & Nephew’s innuendo that Mr. Raffle somehow convinced Examiner Mendez to disregard his obligation to do an independent analysis of the Roos patent. Instead, all of the evidence is to the contrary:

- Because the Roos ‘198 patent was the sole basis of the reexamination request, the Examiner must have considered it in determining initially that it raised a substantial new question of patentability. (PX 7 at 5-26, 64-65.)
- On January 20, 2002, Examiner Mendez placed his initials next to the Roos ‘198 patent listed on the reexamination requestor’s Form PTO-1449, indicating that he had considered the patent. (PX 7 at 66.)
- In the November 15, 2002 Office Action, Examiner Mendez confirmed that he had indeed done “a complete review of the merits of the Request.” (PX 7 at 213.) He even stated that he had engaged in “careful[] consideration and review of Roos ‘198.” (PX 7 at 214.)
- In his analysis of the Roos ‘198 patent, the Examiner added a citation to the Roos ‘667 patent, which demonstrates that he reviewed the documents underlying Mr. Raffle’s arguments distinguishing the Roos ‘198 patent. (*Compare* DTX 301, A-27 with PX 7 at 219).

In any event, an examiner’s agreement with, and acceptance of, a patentee’s position does not constitute inequitable conduct.

Third, the November 15, 2002 Office Action states that “[t]he arguments presented in the Request concerning Roos ‘198 were addressed in a final decision by the examiner of record and reviewed by a board of primary examiners that convened to analyze the decision and make a final determination.” (PX 7 at 213 (emphasis supplied).) Thus, Smith & Nephew’s argument is based on the unsupported assumption that Mr. Raffle somehow convinced not only Examiner Mendez, but the entire board of examiners, to disregard their responsibilities.

Fourth, there is no evidence that Mr. Raffle intended to deceive Examiner Mendez. At trial, Smith & Nephew failed to examine Mr. Raffle regarding its “parroting back” theory. Thus, it bases its allegations entirely upon conjecture. See *In re Hayes Microcomputer Prods.*, 982 F.2d at 1546 (“Conjecture alone is not sufficient to show an intent to deceive to support the defense of inequitable conduct.”).²²

In a final attempt to find support for its assertion that Mr. Raffle convinced Examiner Mendez to ignore his duties and “parrot back” the ‘592 file history, Smith & Nephew renews its request for leave to take Examiner Mendez’s deposition. Such a deposition would be a waste of the parties’ and the Patent Office’s time and resources. Smith & Nephew’s ostensible reason for deposing Examiner Mendez is to determine what was said in the “off-the-record” conversations

²² Smith & Nephew claims that Mr. Raffle had numerous “off-the-record” conversations with Examiner Mendez prior to the first office action on the merits in violation of 37 C.F.R. § 1.560(a) and M.P.E.P. 2281. (D.I. 442 at 26.) Smith & Nephew also claims those discussions were not summarized as required by 37 C.F.R. § 1.560(b) and M.P.E.P. 2281. (*Id.*) There is no evidence in the record of alleged off-the-record conversations. In addition, Mr. Bagade submitted a Written Statement Per 37 C.F.R. § 1.560(b) that summarized various communications between the Patent Office and Messrs. Raffle and Bagade (PX 7 at 228-230), and there is no evidence that this summary is incomplete or inaccurate in any way. In any event, technical violations of Patent Office rules do not constitute inequitable conduct. See *Nintendo of Am. Inc. v Magnavox Co.*, 707 F. Supp. 717, 729-30 (S.D.N.Y. 1989) (rejecting allegation of inequitable conduct based on patentee’s interview with examiner before first office action in reissue and failure to submit a summary of that interview because “these violations in and of themselves do not amount to inequitable conduct sufficient to render the patent invalid”).

between the Examiner and Mr. Raffle. (D.I. 442 at 26.) But there is no evidence of any "off-the-record conversations." On December 16, 2002, Mr. Bagade submitted a Written Statement Per 37 C.F.R. § 1.560(b) that summarized various communications between the Patent Office and Messrs. Raffle and Bagade (PX 7 at 228-30), and Examiner Mendez never corrected or supplemented the contents of that Statement. See M.P.E.P. § 713.04.

Moreover, given the topics that Smith & Nephew wants to cover during the proposed deposition, the questioning will cover areas that are forbidden under M.P.E.P. § 1701.01 and the relevant case law. Any inquiry into why Examiner Mendez used the words that he did in allowing the claims over the Roos '198 patent, or what facts and arguments formed the basis for his decision, would be improper. Those areas necessarily entail investigation into Mr. Mendez's understanding of the prior art, reliance on particular facts or arguments, mental processes, analyses, or conclusions, each of which is specifically forbidden. See M.P.E.P. § 1701.01. Any attempt by Smith & Nephew to disguise such forbidden inquiry into these topics as mere investigation of factual matters should be rejected. See *Western Elec. Co., Inc. v. Piezo Tech., Inc.*, 860 F.2d 428, 432 (Fed. Cir. 1988) (reversing, as an abuse of discretion, a district court's order requiring an examiner to answer questions, including those directed at supporting inequitable conduct: "While the questions posed to [the examiner] may in form be deemed to satisfy the first portion of the above test, i.e., they are limited to factual matters, we are satisfied they fail the second portion, which prohibits inquiry into hypothetical areas or matters relevant to the examiner's thought process in arriving at a decision."). In any event, the trial record is closed and the Court has rejected Smith & Nephew's request to re-open it.

**D. There Is No Evidence That The '882 Patent Was
Procured Through Inequitable Conduct.**

During prosecution of the '882 patent, Mr. Raffle filed a Supplemental Amendment on March 25, 1997, that sought to make two changes to the claims of the application – the first to change “active electrode” to “electrode terminal” and the second to change “electrically conducting liquid” to “electrically conducting fluid.” (DTX 306, C-2-C-12). Unfortunately, Mr. Raffle made some mistakes in attempting to do so. In application claim 23 (which ultimately issued as claim 1), Mr. Raffle changed “active electrode” to “electrode terminal” in three places, but mistakenly failed to change it in a fourth place. (*Id.* at C-3). Also, while Mr. Raffle changed “liquid” to “fluid” in one place, he mistakenly changed “liquid” to “terminal” in another. (*Id.*) Mr. Raffle made a similar mistake in application claim 52, changing “active electrode” to “electrode terminal” in two places, but mistakenly failing to change it in a third place. (*Id.* at C-6-C-7).

Mr. Raffle realized that he had made the mistakes in issued claim 1 when he reviewed the '882 patent on the day it issued. (Tr. at 1526-27.) The very next day, Mr. Raffle sought to correct his mistakes in issued claim 1 by filing a Request for Certificate of Correction. (Tr. at 1527; DTX 306, C-13-C-15). In that Request, Mr. Raffle explained that when he filed the March 25, 1997 Supplemental Amendment, he mistakenly forgot to replace the term “active electrode” with “electrode terminal” in one place in application claim 23, and pointed out that that failure created a possible antecedent basis problem. (DTX 306, C-13). Mr. Raffle further explained that, in application claim 23, he had also mistakenly replaced “liquid” with “terminal” instead of “fluid” as in the rest of claim 23 and in the other claims. (*Id.* at C-14).

On review of the Request, the Supervisor of Art Unit 3306 (the unit that had examined the '882 patent) determined that the changes requested would not constitute new matter, would

not require reexamination, and would not materially affect the scope or meaning of the claims allowed by the examiner. (DTX 306, C-16). As a result, the Patent Office issued the Certificate of Correction. (DTX 306, C-17).

At trial, Smith & Nephew argued that the Certificate of Correction was invalid because it did not correct a clerical or typographical error. (Tr. at 1651.) At the close of the evidence, the jury was instructed that:

When the patent applicant is the one who – like ArthroCare – made the error, it can use a certificate of correction only to correct errors of a clerical or typographical nature. An error is clerical or typographical if one of skill in the art can tell just from looking at the patent and the prosecution history that there was an error and also how that error should be corrected. A certificate of correction for any other errors is not valid and can be challenged in court.

(Tr. at 1734.) On May 12, 2003, the jury rendered its verdict, finding that the certificate of correction was not invalid. (D.I. 405 at 3.)

Smith & Nephew now argues for the first time that, in obtaining the Certificate of Correction, Mr. Raffle committed inequitable conduct by making two affirmative misrepresentations and by failing to explain how the so-called “correction” would broaden the claim. (D.I. 442 at 4, 28-35.) All of those allegations are premised on Smith & Nephew’s contention that the “broadening” of claim 1 was improper because the Certificate of Correction did not correct clerical or typographical errors. But the jury rejected that contention. In reaching its verdict, the jury determined that the Certificate of Correction corrected clerical or typographical errors. That finding is binding on the Court. *See Beacon Theatres, Inc. v. Westover*, 359 U.S. 500, 506-11 (1959) (holding that, pursuant to the Seventh Amendment, a court is bound by a jury’s prior determination on overlapping issues). For this reason alone, Smith & Nephew’s inequitable conduct allegations concerning the ‘882 patent should be rejected.

Smith & Nephew's first allegation with respect to the '882 patent is that Mr. Raffle committed inequitable conduct by falsely asserting, in support of his argument that the changes he was seeking in the Request for Certificate of Correction involved only correction of typographical errors, that "[a]pplicant amended all of the claims to replace the term 'active electrode' with 'electrode terminal.'" (D.I. 442 at 29.) Mr. Raffle testified at trial that, in the March 25, 1997 Supplemental Amendment, he "wanted to replace active electrode with electrode terminal in all the claims." (Tr. at 1524.) Indeed, Mr. Raffle replaced "active electrode" with "electrode terminal" 17 of the 19 times that term appeared in the pending claims, including three times in application claim 23 and twice in application claim 52. (DTX 306, C-2-C-12). That he inadvertently failed to replace "active electrode" once in each of application claims 23 and 52 was a simple mistake – not wrongful conduct that can form the basis for a charge of inequitable conduct. (DTX 306, C-3, C-6-C-7).²³ Moreover, changing "active electrode" to "electrode terminal" cannot be material because the '882 patent, the Court's claim construction, the testimony at trial, and the jury instructions demonstrate that the terms are used interchangeably – "electrode terminal means one or more active electrodes." (D.I. 353 at 3; Tr. at 1112-13; Tr. at 1719.)

In addition, there is no evidence of intent to deceive. As the Request and trial testimony make clear, Mr. Raffle was simply trying to correct typographical errors made in the Supplemental Amendment: "It must have been a typo or an error that happened. It was a mistake. I just missed it." (Tr. at 1525; DTX 306, C-13). Smith & Nephew's assertion that Mr.

²³ Smith & Nephew's citation to *General Electro Music Corp. v. Samick Music Corp.*, 19 F.3d 1405 (Fed. Cir. 1994), is inapposite. (D.I. 442 at 36.) The false statement in that case was in support of a petition to make special, which requires a "sworn statement that the applicant has made a careful and thorough search" of all the prior art. Moreover, the jury found that the applicant's statement was "material and intentionally false." *Id.* at 1411, 1408. In contrast, the jury here found a clerical or typographical error.

is presumed valid – the Patent Office reviewed the Request and determined that the changes would not constitute new matter, would not require reexamination, and would not materially affect the scope or meaning of the claims allowed by the examiner. (DTX 306, C-16). Smith & Nephew's theory must be rejected because it presumes its conclusion – that the Certificate is invalid.

There is no evidence whatsoever that Mr. Raffle acted with intent to deceive. Mr. Raffle admitted that he made the minor mistakes that Smith & Nephew now alleges constitute inequitable conduct. (Tr. at 1525-26.) But those typos, errors, and mistakes demonstrate, at worst, sloppiness, not inequitable conduct. The requirement that intent to deceive be proved by clear and convincing evidence exists, at least in part, to prevent the distortion by infringers of routine prosecution mistakes – like Mr. Raffle's – into inequitable conduct. *See Northern Telecom*, 908 F.2d at 939 (“Given the ease with which a relatively routine act of patent prosecution can be portrayed as intended to mislead or deceive, clear and convincing evidence of conduct sufficient to support an inference of culpable intent is required.”).

III. SMITH & NEPHEW'S ALLEGATIONS OF INFECTIOUS UNENFORCEABILITY ARE LEGALLY AND FACTUALLY BASELESS.

Smith & Nephew asserts – for the first time after trial – that the alleged inequitable conduct in each of the patents-in-suit renders the others unenforceable through the doctrine of infectious unenforceability. (D.I. 442 at 36-40.)

While charges of inequitable conduct are disfavored by this Court, “charges of ‘infectious inequitable conduct’ [are disfavored] even more so.” *Eaton*, 2003 WL 179992, at *1. As an initial matter, an accused infringer asserting infectious unenforceability must prove “inequitable conduct sufficient to hold at least one patent unenforceable before [the court will] consider[]

whether to hold an entire group of related patents unenforceable.” *Speedplay, Inc. v. Behop Inc.*, 211 F.3d 1245, 1259 (Fed. Cir. 2000) (rejecting infectious unenforceability claim). If that threshold is met, “the moving party must [then] demonstrate an ‘immediate and necessary relation’ between the alleged inequitable conduct and enforcement of the related patents.” *Ronald A. Katz Tech. Licensing, L.P. v. Verizon Communications Inc.*, Civ. A. No. 01-5627, 2002 WL 1565483, at *2 (E.D. Pa. July 16, 2002). Under that standard, Smith & Nephew’s infectious unenforceability arguments must fail as a matter of law.

Smith & Nephew has not established an “immediate and necessary relation” between the alleged inequitable conduct with respect to any patent and enforcement of any other patent. Smith & Nephew’s assertion that because the patents are related, have the same inventors, relate to the same technology, have been licensed together, were asserted in this litigation, have similar prior art references, and share common claim terms they should be unenforceable (D.I. 442 at 37) is without support. See *Semiconductor Energy Lab Co., Ltd. v. Samsung Elecs. Co.*, 4 F. Supp. 2d 477, 493 (E.D. Va. 1998) (observing that “no Federal Circuit decision has applied the infectious unenforceability doctrine based solely upon” the facts that the patents “have a common inventor, common owner, similar prior art references, and similar subject matter”), *aff’d*, 204 F.3d 1368 (Fed. Cir. 2000); *Baxter Int’l, Inc. v. McGaw, Inc.*, 149 F.3d 1321, 1332 (Fed. Cir. 1998) (reversing a finding of infectious unenforceability even though patents in question issued from a common application); *Ronald A. Katz*, 2002 WL 1565483, at *2 (“mere relatedness of subject matter” is insufficient to establish the relationship necessary to prove infectious unenforceability).²⁴

²⁴ The only case upon which Smith & Nephew relies, *Consolidated Aluminum Corp. v. Foseco Int’l Ltd.*, 910 F.2d 804 (Fed. Cir. 1990) (D.I. 442 at 36-37), is readily distinguishable. There, the patentee intentionally withheld the best mode of practicing the invention claimed in one of the patents-in-suit, instead disclosing a fictitious, inoperable

In addition, Smith & Nephew's allegations of inequitable conduct do not rise to the level of unconscionability. In *Ristvedt-Johnson, Inc. v. Brandt, Inc.*, 805 F. Supp. 549, 556 (N.D. Ill. 1992), the court stated that "acts warranting application of the [infectious unenforceability] defense must rise to the level of unconscionability," and noted that in three cases where infectious unenforceability had been found, the patentees had obtained the respective patents through "brib[ing] a witness to suppress evidence, committ[ing] a perjurious act, and deliberately disclos[ing] a fictitious inoperable mode to practice a patent in suit." None of the alleged inequitable conduct of which ArthroCare is accused rises to the level of unconscionability. *Id.* ("[The accused infringer's] allegations – garden-variety inequitable conduct without blatant willful fraud – do not rise to the level of unconscionability that calls into question the integrity of the court. Thus, even assuming the truth of [the accused infringer's] allegations about the [various] patents, [the patentee's] alleged conduct would not support an unclean hands defense against [the relevant] patents.").

A. ArthroCare's Alleged Conduct During The '592 Prosecution Cannot Render The '882 Or '536 Patents Unenforceable.

Smith & Nephew's first argument is that ArthroCare's alleged inequitable conduct with respect to the '592 patent renders the '882 and '536 patents unenforceable because the alleged

mode. *Id.* at 807-09. The patentee then filed other applications (which ultimately issued as the other patents-in-suit) that disclosed the previously withheld best mode, and relied on the disclosure of that best mode to establish the patentability of those later applications. *Id.* at 811-12. Because the patentee's failure to disclose the best mode in the earlier patent formed the basis for its successful arguments in prosecuting the later patents, the Federal Circuit found that the patentee's conduct "permeated the prosecution of the patents-in-suit" and established the "immediate and necessary relation" required to find infectious unenforceability. *Id.* at 812. Here, by contrast, Smith & Nephew has not even alleged such a relation between the alleged inequitable conduct and the sought after enforcement of the other patents-in-suit. For example, Smith & Nephew does not even try to explain – because it cannot – how the alleged failure to disclose its 2003 summary judgment briefs during the '536 reexamination could have any effect on the '882 patent that issued more than five years before the briefs were written.

irrelevant to the '592 and '882 patents because those patents were not the subject of that reexamination.

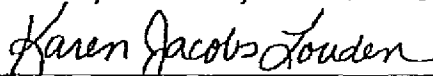
**C. ArthroCare's Alleged Conduct During The '882
Prosecution Cannot Render The '592 Or '536 Patents
Unenforceable.**

Smith & Nephew's final argument is that ArthroCare's conduct with respect to the '882 certificate of correction infects the '592 and '536 patents because all three patents use the terms "active electrode" and "electrode terminal." (D.I. 442 at 39.) That argument makes no sense. Smith & Nephew has cited no authority to support its assertion that patents can be held infectionously unenforceable merely because they use common claim terms. Moreover, there is no basis whatsoever to allege that conduct with respect to a certificate of correction for one patent infects any other patent.

CONCLUSION

There is no evidence – much less clear and convincing evidence – to support Smith & Nephew's inequitable conduct claims. Accordingly, ArthroCare respectfully requests that the Court enter judgment of no inequitable conduct.

MORRIS, NICHOLS, ARSHT & TUNNELL



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July 11, 2003

IV 904993

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

December 12, 2002

THIS IS TO CERTIFY THAT ANNEXED IS A TRUE COPY FROM THE
RECORDS OF THIS OFFICE OF THE FILE WRAPPER AND CONTENTS
OF:

APPLICATION NUMBER: 09/098,205

FILING DATE: July 27, 1998

PATENT NUMBER: 6,224,592

ISSUE DATE: May 01, 2001



By Authority of the
COMMISSIONER OF PATENTS AND TRADEMARKS

P. R. Grant

P. R. GRANT

A-1

Certifying Officer

PART (i) OF (i) PART(S)

I hereby certify that this correspondence is being deposited with the U.S. Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 addressed to: Assistant Commissioner for Patents Washington, D.C. 20231

on January 1998
By John T. Raffle

3558 U.S. PTO
09/098205
06/97/98

PATENT
Attorney Docket No. A-2-2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:)	
PHILIP E. EGGERS et al.)	Examiner: unassigned
Application No.:)	Art Unit: unassigned
Filed: herewith)	
For: SYSTEM AND METHOD FOR)	INFORMATION DISCLOSURE
ELECTROSURGICAL CUTTING)	STATEMENT UNDER
AND ABLATION)	37 CFR §1.97 and §1.98

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The references cited on attached form PTO-1449 are being called to the attention of the Examiner. Copies of each can be found in parent Application No. 08/795,686 filed February 5, 1997.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

Applicant believes that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action.

Respectfully submitted,

John T. Raffle
Reg. No. 38,585

I hereby certify that this correspondence is being deposited with the United States Postal Service first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on

Oct 20, 1999

By

Karl Hym



PATENT
Attorney Docket No. A-2-2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE RECEIVED

OCT 26 1999

Group 3700

In re application of:

PHILIP E. EGGERS et, al.

Examiner: L. Cohen

Application No.: 09/098,205

Art Unit: 3739

Filed: July 27, 1998

For: SYSTEMS AND METHODS FOR
ELECTROSURGICAL TISSUE
TREATMENT IN CONDUCTIVE FLUID

SUPPLEMENTAL INFORMATION
DISCLOSURE STATEMENT UNDER
37 CFR §1.97 and §1.98

#5
J.L.
10-28-99

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The references cited on attached form PTO-1449 are being called to the attention of the Examiner. Copies of articles and foreign patents and applications are enclosed herewith. Copies of the U.S. patents can be found in parent Application No. 08/795,686 filed February 5, 1997.

Applicant also brings the following information and list of materials to the attention of the Examiner. On February 13, 1998, ArthroCare Corporation filed a lawsuit in the United States District Court for the Northern District of California against defendants Ethicon, Inc., Mitek Surgical Products, Inc., and Gynecare, Inc. alleging infringement of U.S. Patent Nos. 5,697,909, 5,697,536, 5,697,281, and 5,697,882 (the "patents-in-suit"). The case was assigned Case No. C98-00609 WHO. The litigation terminated in June 1999, with the defendants taking a license from ArthroCare under the patents-in-suit. The defendants have paid ArthroCare a license fee, and will pay ongoing royalties on sales in the United States of certain arthroscopy and gynecology products covered by these patents.

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Very recently, and after the litigation terminated, applicants were apprised by a third party of section 2001.06(c) of the Manual of Patent Examining Procedure ("MPEP") with respect to the prosecution of applications for patents other than those at issue in the litigation and that were pending before the litigation was commenced, namely, U.S. Application Nos. 08/807,111 (now U.S. Patent No. 5,891,095), 08/766,382 (now U.S. Patent No. 5,888,198), and 08/760,768 (now U.S. Patent No. 5,766,153).

Having considered MPEP section 2001.06(c) following receipt of the correspondence from the third party, Applicant does not believe that MPEP section 2001.06(c) requires the disclosure of the above-described litigation or any materials related to that litigation in the present application. Applicant further does not believe that MPEP section 2001.06(c) required such disclosure in connection with any other applications that were pending after the litigation commenced. Among other things, the subject matter (i.e. the inventions recited in the claims) of this application and the other pending applications was not at issue in the litigation.

Nevertheless, applicant did bring the above-described litigation to the attention of Examiner Mendez during the prosecution of at least U.S. Application Nos. 08/807,111 (now U.S. Patent No. 5,891,095), 08/766,382 (now U.S. Patent No. 5,888,198), and 08/795,686 (now U.S. Patent No. 5,871,469), during a telephone conference relating to those applications. Applicant also submitted the prior art that was principally relied on by the defendants in the litigation to Examiner Mendez during the prosecution of U.S. Application Nos. 08/807,111 (now U.S. Patent No. 5,891,095), 08/766,382 (now U.S. Patent No. 5,888,198), and 08/795,686 (now U.S. Patent No. 5,871,469). Indeed, Applicant withdrew one of those pending applications, U.S. Application No. 08/807,111 from allowance to provide Examiner Mendez with the opportunity to consider those references. Applicant has already submitted that prior art in connection with the present application for the Examiner's consideration.

In addition, Applicant provides the following list of materials from the litigation that reflect defendants' and

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ArthroCare's primary arguments relating to issues of validity and enforceability.

1. ArthroCare's Complaint For Patent Infringement Of U.S. Letters Patent Nos. 5,697,909; 5,697,281; 5,697,882; and 5,697,536 filed February 13, 1998;
2. Plaintiff ArthroCare's Motion For Preliminary Injunction Against Defendant Ethicon and Mitek, filed March 10, 1998.
3. Answer and Counterclaim Of Defendants Ethicon, Inc., Mitek Surgical Products, Inc., and Gynecare, Inc., filed April 6, 1998;
4. Plaintiff ArthroCare's Motion To Strike Affirmative Defenses And To Strike Defendants' Counterclaim In Part Or, In The Alternative, For a More Definite Statement, filed April 17, 1998;
5. Defendants' Opposition To ArthroCare's Motion To Strike Affirmative Defenses And To Strike Defendants' Counterclaim In Part Or, In The Alternative For A More Definite Statement And Points And Authorities In Support Of Conditional Motion To File An Amended Answer and Counterclaim, filed May 7, 1998;
6. ArthroCare's Reply In Support of Motion To Strike Affirmative Defenses And To Strike Defendants' Counterclaim In Part Or, In The Alternative, For A More Definite Statement, filed May 14, 1998;
7. Memorandum Decision And Order Regarding ArthroCare's Motion To Strike And Defendants' Motion For Leave To File An Amended Answer And Counterclaim, issued June 5, 1998;
8. Amended Answer And Counterclaim of Defendants Ethicon, Inc., Mitek Surgical Products, Inc., and Gynecare, Inc., filed June 22, 1998;
9. ArthroCare's Reply to Defendants' Amended Counterclaim, filed July 6, 1998;
10. ArthroCare's Initial Disclosure Of Asserted Claims Pursuant To Local Rule 16-7, served March 30, 1998;
11. Defendants' Initial Disclosure of Prior Art Pursuant To Local Rule 16-7, served May 26, 1998;
12. Plaintiff ArthroCare's Corporation's Opening Claim Construction Brief, filed May 11, 1998;
13. Ethicon, Inc.'s Claim Construction Brief, filed May 22, 1998;
14. Joint Claim Construction Statement Pursuant To Civil Local Rule 16-11(b) (1) For Claim Construction Hearing, filed May 29, 1998;

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15. Plaintiff ArthroCare's Corporation's Reply To Defendants' Claim Construction Brief, filed May 29, 1998;
16. Memorandum Decision And Order Regarding Claim Construction, issued July 6, 1998;
17. Defendants' Petition For Permission To Appeal Pursuant To 28 U.S.C. § 1292(b) filed with the U.S. Court of Appeals for the Federal Circuit on July 16, 1998;
18. Plaintiff's Answer To Defendants' petition For Permission To Appeal Pursuant To 28 U.S.C. § 1292(b), filed July 23, 1998;
19. Federal Circuit's Order On Petition For Permission To Appeal, issued August 20, 1998;
20. Summary Of Defendant Ethicon's Opposition To Plaintiff ArthroCare's Motion For Preliminary Injunction, filed July 23, 1998;
21. Ethicon's Opposition To Plaintiff ArthroCare's Motion For Preliminary Injunction, filed July 23, 1998;
22. Declaration Of John R. LaCourse In Opposition To ArthroCare's Motion For Preliminary Injunction, filed July 23, 1998;
23. Declaration Of Robert D. Tucker Filed In Support Of Ethicon's Opposition To ArthroCare's Motion For Preliminary Injunction, filed July 23, 1998;
24. Declaration Of Robert A. Armitage, Esq., Filed In Support Of Ethicon's Opposition To ArthroCare's Motion For Preliminary Injunction , filed July 23, 1998;
25. Supplemental Declaration Of Robert A. Armitage, Esq., In Support of Ethicon's Opposition To Plaintiff ArthroCare's Motion For Preliminary Injunction, filed August 4, 1998;
26. ArthroCare's Reply Memorandum In Support Of Motion For Preliminary Injunction, filed August 6, 1998;
27. Declaration Of James Doss In Support Of ArthroCare's Motion For Preliminary Injunction, filed August 6, 1998;
28. Reply Declaration Of Philip E. Eggers In Support Of ArthroCare's Motion For Preliminary Injunction, filed August 6, 1998;
29. Reply Declaration Of John T. Raffle In Support Of ArthroCare's Motion For Preliminary Injunction, filed August 6, 1998;
30. Ethicon's Supplemental Opposition To Plaintiff ArthroCare's Motion For Preliminary Injunction, filed September 3, 1998.

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31. Supplemental Declaration Of Robert D. Tucker, Ph.D. M.D., Filed In Support Of Ethicon's Opposition To ArthroCare's Motion For Preliminary Injunction, filed September 3, 1998;
32. Supplemental Declaration Of John R. LaCourse, Ph.D., Filed In Support Of Ethicon's Opposition To ArthroCare's Motion For Preliminary Injunction, filed September 3, 1998;
33. Direct Examination Of Robert D. Tucker, Ph.D., M.D., Filed In Support Of Ethicon's Opposition To ArthroCare's Motion For Preliminary Injunction; filed September 3, 1998;
34. Direct Examination of Robert A. Armitage, Esq., Filed In Support Of Ethicon's Opposition To ArthroCare's Motion For Preliminary Injunction, filed September 3, 1998;
35. Direct Examination of John R. LaCourse, Ph.D., Filed In Support Of Ethicon's Opposition To ArthroCare's Motion For Preliminary Injunction, filed September 3, 1998;
36. ArthroCare's Supplemental Memorandum In Response To The Supplemental Declaration Of Robert A. Armitage, filed September 3, 1998;
37. Direct Testimony Of John T. Raffle In Support Of ArthroCare's Motion For Preliminary Injunction, filed September 3, 1998;
38. Direct Testimony Of Philip E. Eggers In Support Of ArthroCare's Motion For Preliminary Injunction, filed September 3, 1998;
39. Joint Statement Regarding Differences Between The Two Translations Of The Elsasser And Roos Article Proffered By Defendants, filed September 22, 1998;
40. Memorandum Decision And Order Regarding Preliminary Injunction Motion, issued December 2, 1998;
41. Ethicon's Response To ArthroCare's First Set of Interrogatories To Defendant Ethicon, served November 6, 1998;
42. Plaintiff ArthroCare's Response To Defendant Gynecare, Inc.'s First Set Of Interrogatories, served November 10, 1998;
43. Plaintiff ArthroCare's Response To Mitek's First Set Of Interrogatories, served November 10, 1998;
44. Plaintiff ArthroCare's Response To Defendant Ethicon, Inc.'s First Set of Interrogatories, served November 10, 1998;
45. Plaintiff ArthroCare's Objections And Responses To Defendants' First Set Of Requests For Admissions, served January 4, 1999;

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46. Plaintiff ArthroCare's Objections and Responses To Defendant Gynecare, Inc.'s Second Set Of Interrogatories, served January 4, 1999;
47. Plaintiff ArthroCare's Supplemental Objections and Responses to Defendants' Request For Admission No. 36, served January 5, 1999;
48. Expert Witness Report of John R. LaCourse, served January 8, 1999;
49. Expert Witness Report of Robert D. Tucker, served January 8, 1999;
50. Expert Witness Report of David J. Parins, served January 8, 1999;
51. Expert Witness Report of Robert A. Armitage, Esq., served January 8, 1999;
52. Expert Witness Report of Massoud Motamedi, Ph.D., served January 8, 1999;
53. Expert Witness Report of Ashley J. Welch, Ph.D., served January 8, 1999;
54. Responsive Expert Report of Leslie A. Geddes, Ph.D., served January 29, 1999;
55. Responsive Expert Report of Donald W. Banner served January 29, 1999;
56. Supplemental Expert Report of David J. Parins served February 9, 1999;
57. Ethicon's Motion For Summary Judgment Of Invalidity For Failure To Satisfy The Requirements of 35 U.S.C. §§ 102-103, filed March 5, 1999;
58. Joint Statement Of Uncontested Facts In Support Of Ethicon's Motion For Partial Summary Judgment Of Invalidity Under 35 U.S.C. §§ 102 and 103, filed March 5, 1999;
59. Plaintiff ArthroCare's Opposition To Defendants' Motion For Summary Judgment Of Invalidity Under 35 U.S.C. §§ 102-103, filed March 18, 1999;
60. Ethicon's Reply Memorandum In Support Of Motion For Summary Judgment Of Invalidity Under 35 U.S.C. §§ 102 and 103, filed March 25, 1999;
61. Ethicon's Motion For Partial Summary Judgment Of Invalidity For Failure To Satisfy The Requirements of 35 U.S.C. § 112, filed March 5, 1999;

62. Joint Statement Of Uncontested Facts In Support Of Ethicon's Motion For Partial Summary Judgment For Invalidity For Failure To Satisfy The Requirements Of 35 U.S.C. § 112, filed March 5, 1999;
63. Plaintiff ArthroCare's Opposition To Defendants' Motion For Partial Summary Judgment Of Invalidity For Failure To Satisfy The Requirements Of 35 U.S.C. § 112, filed March 18, 1999;
64. Ethicon's Reply Memorandum In Support Of Motion For Partial Summary Judgment Of Invalidity For Failure To Satisfy The Requirements Of 35 U.S.C. § 112, filed March 25, 1999;
65. Declaration Of Leslie A. Geddes, Ph.D., In Support Of ArthroCare's Oppositions To Defendants Motions For Partial Summary Judgment, filed March 18, 1999;
66. Plaintiff ArthroCare's Motion For Partial Summary Judgment That Claims Are Not Anticipated Or Rendered Obvious By Certain References, filed March 5, 1999;
67. Ethicon's Opposition To ArthroCare's Motion For Partial Summary Judgment That Claims Are Not Anticipated Or Rendered Obvious By Certain References, filed March 18, 1999;
68. ArthroCare's Reply Brief In Support Of ArthroCare's Motion For Partial Summary Judgment That Claims Are Not Anticipated Or Rendered Obvious By Certain References, filed March 25, 1999;
69. Plaintiff ArthroCare's Motion For Partial Summary Judgment Of No Inequitable Conduct Or, Alternatively, For Bifurcation, filed March 5, 1999;
70. Joint Statement Of Undisputed Facts In Support Of ArthroCare's Motion For Partial Summary Judgment Of No Inequitable Conduct Or, Alternatively, For Bifurcation, filed March 5, 1999;
71. Ethicon's Opposition Of Plaintiff ArthroCare's Motion For Partial Summary Judgment Of No Inequitable Conduct Or Alternatively For Bifurcation, filed March 18, 1999;
72. Declaration Of Robert A. Armitage, Esq., In Support Of Defendant Ethicon, Inc.'s Opposition To ArthroCare's Motion For Summary Judgment, filed March 18, 1999;
73. Plaintiff ArthroCare's Reply Brief In Support Of Its Motion For Partial Summary Judgment Of No Inequitable Conduct Or, Alternatively, For Bifurcation, filed March 25, 1999;

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74. Plaintiff ArthroCare's Motion For Partial Summary Judgment That Defendants Cannot Prevail On Their Enablement And Written Description Defenses As To Certain Claims, filed March 5, 1999;
75. Joint Statement Of Undisputed Facts In Support Of ArthroCare's Motion For Partial Summary Judgment That Defendants Cannot Prevail Under Enablement And Written Description Defenses As To Certain Claims, filed March 5, 1999;
76. Ethicon's Opposition To ArthroCare's Motion For Partial Summary Judgment That Defendants Cannot Prevail On Their Enablement And Written Description Defenses As To Certain Claims, filed March 18, 1999;
77. ArthroCare's Reply Brief In Support Of ArthroCare's Motion For Partial Summary Judgment That Defendants Cannot Prevail On Their Enablement And Written Description Defenses As To Certain Claims, filed March 25, 1999;
78. Defendants' Trial Brief On The Issues Of Unenforceability And Invalidity Under 35 U.S.C. §§ 102, 103, and 112, filed March 29, 1999;
79. Plaintiff ArthroCare's Trial Brief Re: Validity and Enforceability Of The Patents-In-Suit, filed April 7, 1999;
80. Defendants' Notice Of Prior Art Pursuant To 35 U.S.C. § 282, filed April 9, 1999;
81. April 26, 1999 Letter From Defendants To The Court Regarding Additional Claim Construction Issues;
82. Joint Proposed Jury Instructions For Claims 46, 55, 58, 59, 61, and 62 of U.S. Patent No. 5,697,536;
83. April 30, 1999 Letter From ArthroCare To The Court Regarding Additional Claim Construction Issues;
84. Expedited Motion Of Plaintiff ArthroCare Corporation Regarding Joint Jury Instructions, filed May 13, 1999;

In addition to the above-listed materials, there are numerous other papers that were filed with the Court in connection with the above-referenced litigation. Furthermore, depositions were taken of numerous witnesses regarding validity and enforceability issues. If the Examiner desires, Applicant will submit any or all of the listed material, the other papers filed with the court, and/or

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transcripts of depositions to the Examiner for consideration.
Applicant will also provide any additional information that the
Examiner desires about the litigation or the materials described
herein.

Applicant respectfully requests that the Examiner advise
Applicant in writing whether he wishes any additional information
about the litigation or any of the litigation-related materials
described herein or wishes Applicant to submit any materials to the
Examiner for consideration.

The following is a list of co-pending applications,
including this application, relating to the technology covered by this
application:

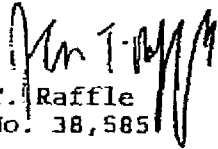
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08/761,096	12/05/96	09/183,838	10/30/98
08/562,332	11/22/95	09/002,254	12/31/97
08/942,580	10/02/97	09/054,660	04/03/98
08/942,579	10/02/97	09/338,842	06/23/99
08/970,239	11/14/97	09/347,390	07/06/99
08/970,242	11/14/97	09/062,869	04/20/98
08/874,173	06/13/97	09/354,835	07/16/99
09/026,852	02/20/98	09/002,315	01/02/98
09/041,934	03/13/98	09/083,533	05/22/98
09/258,516	02/26/99	09/109,219	06/30/98
09/098,205	07/27/98	09/058,571	04/10/98
09/134,542	08/13/98	09/357,774	07/21/99
09/177,861	10/23/98	09/357,778	07/21/99
09/262,281	03/04/99	09/032,375	02/27/98
09/314,247	05/18/99	09/058,336	04/10/98
09/273,612	03/22/99	09/248,763	02/12/99
09/360,075	07/23/99	09/314,611	05/19/99
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09/197,013	11/20/98	08/977,845	11/25/97
09/330,275	06/11/99	09/313,956	05/18/99
09/372,454	08/11/99	08/978,340	11/25/97
09/089,012	06/02/98	09/313,957	05/18/99
09/313,955	05/18/99	09/162,110	09/28/98
09/162,117	09/28/98	09/205,640	12/03/98
09/293,231	04/16/99	08/990,374	12/15/97
09/083,526	05/22/98	09/054,323	04/02/98
09/074,020	05/06/98	09/136,079	08/18/98
09/268,616	03/15/99	09/295,687	04/21/99
09/181,936	10/28/98	09/026,851	02/20/98
09/345,665	06/30/99	09/345,400	07/01/99
09/026,698	02/20/98	09/130,804	08/07/98
09/316,472	05/21/99		

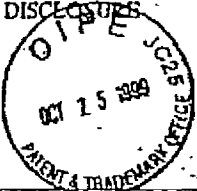
Philip E. Eggers et al.
Application No. 09/098,205
Page 10 of 10

It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

Applicant believes that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action.

Respectfully submitted,


John T. Raffle
Reg. No. 38,585

FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Attorney Docket No. A-2-2	Serial No.: 09/098,205
		Applicant: PHILIP E. EGGERS et al.	
Filing Date: July 27, 1998		Group: 3739	


Reference Designation		U.S. PATENT DOCUMENTS				
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (If Appropriate)
<u>AA</u>	5,647,869	07/15/97	Goble et al.	606	37	
<u>AB</u>	4,232,676	11/11/80	Herczog	128	303	
<u>AC</u>	5,330,470	07/19/94	Hagen	606	42	
<u>AD</u>	5,700,262	12/23/97	Acosta et al.	606	48	
<u>AE</u>	5,192,280	03/09/93	Parins	606	48	
<u>AF</u>	5,035,696	07/30/91	Rydell	606	47	
<u>AG</u>	5,441,499	08/15/95	Fritsch	606	45	
<u>AH</u>	5,749,869	05/12/98	Lindeomeier et al.	606	34	
<u>AI</u>	5,584,872	12/17/96	LaFontaine et al.	607	116	
<u>AJ</u>	5,676,693	10/14/97	LaFontaine	607	116	
<u>AK</u>	5,496,312	03/05/96	Klicek	606	34	
<u>AL</u>	5,514,130	05/07/96	Baker	606	41	
<u>AM</u>	5,807,395	09/15/98	Mulier et al.	606	41	
<u>AN</u>	4,709,698	12/01/87	Johnston et al.	128	303	

FOREIGN PATENT DOCUMENTS						
	Document No.	Date	Country	Class	Sub-class	Translation (yes/no)
<u>AO</u>	0 754 437	01/22/97	EP	A61B	17/39	
<u>AP</u>	97/24073	07/10/97	WIPO	A61B	17/39	
<u>AQ</u>	97/24993	07/17/97	WIPO	A61B	17/39	
<u>AR</u>	97/48346	12/24/97	WIPO	A61B	17/39	
<u>AS</u>	97/24994	07/17/97	WIPO	A61B	17/39	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)	

EXAMINER: <u>P. J. R.</u>	DATE CONSIDERED: <u>11/5/99</u>
---------------------------	---------------------------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)			Attorney Docket No. A-2-2		Serial No.: 09/098,205	
			Applicant: PHILIP E. EGGERS et al.		Group: 3739	
			Filing Date: July 27, 1998			
Reference Designation U.S. PATENT DOCUMENTS						
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (if appropriate)
DE AT	4,955,377	09/11/90	Leannox et al.	128	401	
— AU	5,885,277	01/23/99	Korth	606	35	
— AV	5,891,095	04/06/99	Eggers et al.	604	114	
— AW	5,697,281	12/16/97	Eggers et al.	604	114	
— AX	5,681,282	10/28/97	Eggers et al.	604	114	
— AY	5,697,536	12/16/97	Eggers et al.	604	114	
— AZ	5,697,882	12/16/97	Eggers et al.	604	114	
— BA	5,697,909	12/16/97	Eggers et al.	604	114	
— BB	5,766,153	06/16/98	Eggers et al.	604	114	
— BC	5,810,764	09/22/98	Eggers et al.	604	23	
— BD	5,683,366	11/04/97	Eggers et al.	604	114	
— BE	5,907,272	05/11/99	Eggers et al.	604	114	
— BF	5,897,553	04/27/99	Mulier et al.	606	114	
— BG	5,556,397	09/17/96	Long et al.	606	114	
FOREIGN PATENT DOCUMENTS						
	Document No.	Date	Country	Class	Sub-class	Translation (yes/no)
— BH	57-57802	04/05/82	Japan	A61B	1/100	
— BI	96/00042	01/04/96	WIPO	A61B	17/39	
— BJ	95/34259	12/21/95	WIPO	A61F	5/48	
— BK	WO 97/48345	12/24/97	WIPO	A61B	17/39	
— BL	98/27880	07/02/98	WIPO	A61B	17/39	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)						
EXAMINER <u>LEE</u>			DATE CONSIDERED <u>11/1/98</u>			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

TM 504931

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

December 12, 2002

THIS IS TO CERTIFY THAT ANNEXED IS A TRUE COPY FROM THE
RECORDS OF THIS OFFICE OF THE FILE WRAPPER AND CONTENTS
OF:

APPLICATION NUMBER: 09/098,205

FILING DATE: July 27, 1998

PATENT NUMBER: 6,224,592

ISSUE DATE: May 01, 2001



By Authority of the
COMMISSIONER OF PATENTS AND TRADEMARKS

P. R. Grant
P. R. GRANT
A-15 Certifying Officer

PART (1) OF (3) PART(S)



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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021394 02/27/98 EGGERS

AB 5-7-2

021394
ARTHROCAPE CORPORATION
895 N PASTORIA AVENUE
SUNNYVALE CA 94086

QM12/6229

EXAMINER

COHEN, L

ART UNIT

PAPER NUMBER

3739

DATE MAILED:

02/29/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/098,205

Applicant(s)

Eggers et al

Examiner

Lee S. Cohen

Group Art Unit

3739

☒ Responsive to communication(s) filed on Jan 31, 2000

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 80, 81, and 83-159 is/are pending in the application.

Of the above, claim(s) 103-137 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 80, 81, 83-85, 87-102, and 138-159 is/are rejected.

☒ Claim(s) 86 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 3739

Claims 103-137 stand withdrawn from further consideration by the examiner, 37 CFR 1.142(b) as being drawn to a non-elected invention. Election was made *without* traverse in Paper No. 6.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 90-92, 102, and 138-159 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 90 - "the probe" in line 3 lacks antecedent basis. Claim 102 - "the electrically conducting fluid" lacks antecedent basis. Claim 138 - "the electrode, terminal" in lines 7 and 8 lacks antecedent basis. Claims 141, 143, 144, 146-148, 150-152, and 157-159 - "the electrode terminal" lacks antecedent basis. Claim 159 -the probe and its recited elements lack antecedent basis.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371 of this title before the invention thereof by the applicant for patent.

Art Unit: 3739

Claims 80, 81, 83-85, 89, 90, 92, 98-100, 138-143, 148, 150, and 156-158 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Roos (4,116,198). The device includes a spaced return electrode as shown by Figure 1. A washing fluid passes through the axial lumen of the device. Since the return electrode is removed from the body structure, a conductive fluid must complete the current flow path.

Claims 80, 81, 83-85, 87, 89, 90, 92, 94-96, 98-102, 138-143, 145, 147, 148, 150, 152-154, and 156-159 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Mulier et al (5,609,151). Applicant's attention is directed to embodiment disclosed in Figures 3 and 4 as detailed at column 6, lines 17-59. Electrodes 202 and 216 may be used in conjunction with one another which would space the ring electrode 216 from the electrode terminal 202.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 87 and 145 are rejected under 35 U.S.C. 103(a) as being unpatentable Roos in view of Mulier et al (5,609,151). The particular fluid for similar methodology is taught by Mulier et al. Accordingly, it would have been within the level of skill of the artisan to select isotonic saline to optimize performing the treatment.

Claims 88, 93, 146, and 151 are rejected under 35 U.S.C. 103(a) as being unpatentable Roos/Mulier et al in view of Baker (5,514,130). Controlling current flow based upon impedance

Art Unit: 3739

or temperature is taught by Baker. Accordingly, it would have been within the level of skill of the artisan to control the current to optimize performing the treatment in light of this teaching.


Claims 91 and 149 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roos or Mulier et al. The particular voltage would have been within the level of skill of the artisan to select to optimize performing the treatment.

Claims 97 and 155 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roos or Mulier et al. The particular material would have been within the level of skill of the artisan to select to optimize performing the treatment.

Claim 86 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 144 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to Lee S. Cohen at telephone number (703) 308-2998.


Lee Cohen
Primary Examiner

67443739

#111C
K Cooper
6-9-00

This correspondence is being deposited with the United States
Postal Service as first class mail in an envelope addressed
for Assistant Commissioner for Patents
Washington, D.C. 20231

on May 25, 2000
By Kaku



Attorney Docket No. A-2-2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:)	
PHILIP E. EGGERS et al.,)	Examiner: L. Cohen
Application No.: 09/098,205)	Art Unit: 3739
Filed: July 27, 1998)	
For: SYSTEMS AND METHODS FOR)	AMENDMENT
ELECTROSURGICAL TISSUE)	
TREATMENT IN CONDUCTIVE FLUID)	

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Office Action mailed February 29, 2000, please amend the
above-identified application as follows.

IN THE CLAIMS:

Please cancel claim 159 and amend claims 90, 102, 138, 141, 143, 144,
146-148, 150-152, 157 and 158 as follows:

90. (Twice Amended) The method of claim 80, wherein the active return
electrode is located on a distal end of an instrument shaft, further comprising an insulating
matrix on the [probe] instrument shaft between the return electrode and the active electrode
[terminal], the insulating matrix comprising an inorganic material.

Philip E. Eggers et al.

Serial No. 09/098,205

Page 2

C² 102. (Twice Amended) The method of claim 99 wherein the return electrode is an outer tubular member defining an axial passage between the outer surface of the probe and the inner surface of the outer tubular member, the delivering step including directing the electrically [conducting] conductive fluid through the axial passage to the distal end of the probe over the active electrode [terminal].

C³ 138. (Amended) A method for applying electrical energy to a target site on a body structure on or within a patient's body, the method comprising:

contacting an active electrode with the body structure in the presence of an electrically conductive fluid;

spacing a return electrode away from the body structure in the presence of the electrically conductive fluid; and

applying a high frequency voltage difference between the active electrode [terminal] and the return electrode such that an electrical current flows from the active electrode [terminal], through the electrically conductive fluid, and to the return electrode.

C⁴ 141. (Amended) The method of claim 138 further comprising immersing the target site within a volume of the electrically conductive fluid and positioning the return electrode within the volume of electrically conductive fluid to generate a current flow path between the active electrode [terminal] and the return electrode.

C⁵ 30 143. (Amended) The method of claim 138 wherein the active electrode [terminal] comprises a single active electrode disposed near the distal end of an instrument shaft.

31 144. (Amended) The method of claim 138 wherein the active electrode [terminal] includes an array of electrically isolated electrode terminals disposed near the distal end of an instrument shaft.

²³
146. (Amended) The method of claim 138 including independently controlling current flow to the active electrode [terminal] based on electrical impedance between the active electrode [terminal] and the return electrode.

³⁴
147. (Amended) The method of claim 138 wherein the return electrode is spaced from the active electrode [terminal] such that when the active electrode [terminal] is brought adjacent a tissue structure immersed in electrically conductive fluid, the return electrode is spaced from the tissue structure and the electrically conductive fluid completes a conduction path between the active electrode [terminal] and the return electrode.

³⁵
148. (Amended) The method of claim 138, wherein the return electrode is located on a distal end of a probe, further comprising an insulating matrix at the distal tip of the probe between the return electrode and the active electrode [terminal], the insulating matrix comprising an inorganic material.

³⁷
150. (Amended) The method of claim 138 further comprising applying a sufficient voltage difference between the return electrode and the active electrode [terminal] to effect the electrical breakdown of tissue in the immediate vicinity of the active electrode [terminal].

¹³⁸
151. (Amended) The method of claim 138 further comprising measuring the temperature at the target site and limiting power delivery to the active electrode [terminal] if the measured temperature exceeds a threshold value.

³⁹
152. (Amended) The method of claim 138 further comprising applying a sufficient high frequency voltage difference to vaporize the electrically conductive fluid in a thin layer over at least a portion of the active electrode [terminal] and to induce the discharge of energy to the target site in contact with the vapor layer.

157. (Amended) The method of claim 138 wherein the active electrode [terminal] is located on the distal end of a probe, and wherein the delivering step comprises supplying the electrically conductive fluid to a proximal end of an axial lumen within the probe and directing the fluid through a distal end of the axial lumen to the active electrode [terminal].

158. (Amended) The method of claim 138 further including positioning a distal end of a fluid supply shaft adjacent the active electrode [terminal], the delivering step comprising directing the electrically conductive fluid through an inner lumen in the fluid supply shaft that is electrically connected to the return electrode and discharging the fluid through an open distal end of the supply shaft towards the active electrode [terminal].

REMARKS

Claims 80, 81 and 83-158 are pending. Applicant has canceled claim 159 and amended claims 90, 102, 138, 141, 143, 144, 146-148, 150-152, 157 and 158 to address the Examiner's 112 rejections on page 3 of the Office Action.

The majority of the claims stand rejected as being anticipated by Roos and Mulier. Applicant disagrees with these rejections. The instant application discloses and claims, in part, novel methods for performing, and systems used to perform, electrosurgery in the presence of electrically conductive fluid. For example, in performing electrosurgery according to the method of claim 80, the active and return electrodes of the instrument are both positioned near a tissue site in the presence of electrically conductive fluid, such as isotonic saline or Ringer's lactate. The return electrode is spaced away from the tissue such that electric current flows from the active electrode, through the conductive fluid, to the return electrode.

Independent claims 80 and 138 each require that the return electrode be spaced from the tissue. Mulier does not disclose or suggest this feature. Mulier discloses a monopolar electrosurgery device that requires a return pad attached to the patient's skin. Thus, the return electrode is always in contact with the tissue. Both electrodes 202 and 216 of the Mulier device are active electrodes that provide lesions in the tissue. Return electrodes are

not used to create lesions in tissue. Electrical current does not flow from electrode 202 to 216. Rather, the current flows from either, or both, electrode(s) 202, 216 to a return pad electrode (not shown).

Moreover, Mulier does not disclose that the conductive fluid creates a conductive path between the active and return electrodes. As discussed above, the return electrode in the Mulier device is a dispersive return pad placed on the outer surface of the patient's skin. The conductive fluid in Mulier is used to expand the size of the lesion by spreading the effective area of the electrical current across a wider area (col. 2, lines 10-12). With active electrode 202, the conductive fluid helps create a helical ablation zone because it spreads the current density from the tip of the active electrode 202 to a wider zone. This ablation zone would not be created in such a fashion if electrode 216 were acting as a return electrode. Likewise, with active electrode 216, the conductive fluid creates a conductive path to the tissue, and helps create a conical ablation zone. Again, this conical ablation zone would not be created if the current were flowing from electrode 216 to electrode 202.

In light of the above, applicant requests that the Examiner withdraw the rejections over the Mulier reference.

Turning to Roos, independent claims 80 and 138 each require that both the active and return electrodes be operated in the presence of "electrically conductive fluid" during electrosurgery. Because the Roos '198 Patent does not disclose the use of electrically conductive fluid with any devices disclosed therein, it cannot anticipate any of the claims of this application.

The Roos '198 Patent never describes the use of "electrically conductive fluid" during electrosurgery. The Roos '198 Patent only discloses the use of an unspecified "washing liquid" that flows through the endoscope that houses the treatment and neutral electrodes. See Roos '198 Patent at 4:51-57, Fig. 1. The Roos '198 Patent does not state that the "washing liquid" that is supplied to the region of the surgical site is electrically conductive fluid. This omission is significant, because numerous non-conductive washing liquids, such as distilled water, glycine, sorbitol, and the like, have been used in electrosurgery and are still in use today. See, e.g., U.S. Patent No. 4,936,301 to Rexroth, et al. at 1:62-64 and 2:4-7.

In fact, the Roos '198 specification makes clear that the "washing liquid" delivered to the surgical site in the Roos '198 Patent is not electrically conductive. The Roos '198 Patent states at column 6, lines 51-53 that "the neutral electrode 11 in the form of a steel band rests on the tissue in large area form, so that good electrical contact is ensured." If the "washing liquid" were electrically conductive, there would be no need for the neutral electrode to rest on the tissue in large area form to ensure good electrical contact; electrical contact between the neutral electrode and the cutting electrode would be ensured by the "washing liquid" itself. The statement in the Roos '198 Patent that tissue contact with the neutral electrode is needed to ensure electrical contact plainly shows that the "washing liquid" described in the Roos '198 Patent could not have been electrically conductive.

A later-issued patent to the same named inventor, U.S. Patent No. 4,706,667 ("the Roos '667 Patent") to Roos, demonstrates unequivocally that the "washing liquid" disclosed in the Roos '198 Patent was not electrically conductive. Applicant has enclosed a copy of the Roos '667 patent for the convenience of the Examiner. The Roos '198 Patent claims priority to German Patent Application No. 2521719 ("German Patent Application"). The Roos '667 Patent explains at column 1 lines 14-29 that the device described in the German Patent Application (and thus in the Roos '198 Patent) did not work to cut tissue because the medium in contact with the electrodes was not electrically conductive:

In a known electro-surgical high frequency cutting instrument of this kind (DE-OS No. 25 21 719) the neutral electrode is admittedly arranged in the immediate vicinity of the cutting electrode, it is however so separated from the tissue by a plastic cover, or by its arrangement in an endoscope, that it can only enter into electrical contact with the cutting electrode electrolytically via the secretion which is present during the cutting process. As a result, it is difficult to maintain the current intensity required for trouble free cutting in a required precisely defined manner at the cutting electrode. Thus, if the power setting at the r.f. generator is too high, burns can result or, if the power setting is too low, then a poor cut or indeed injury occurs because the tissue to be cut sticks to the cutting electrode as a result of coagulation processes.

According to the Roos '667 Patent, the device disclosed in the parent application to the Roos '198 Patent (and thus in the Roos '198 Patent itself) did not work because there was insufficient electrical contact between the neutral and cutting electrodes to cut tissue, even though the electrodes were in the "immediate vicinity" of one another. If the Roos '198 Patent had delivered electrically conducting fluid to the tissue site, such as isotonic saline, then the Roos '667 Patent surely would not have stated, as it did, that the cutting and neutral electrodes "only enter into electrical contact" with each other "via the secretion which is present during the cutting process." If Roos '198 had delivered electrically conducting fluid to the tissue site, there would have been an electrical connection between the cutting and neutral electrodes by virtue of the electrically conducting fluid itself, regardless of whether bodily secretions were present. Plainly, Roos '198 used non-conducting "washing liquid" and attempted to rely on bodily secretions from the cutting process to make the non-conductive "washing liquid" more conductive. According to the Roos '667 Patent, these secretions did not make the non-conductive "washing liquid" electrically conductive.

Significantly, the Roos '667 Patent did not solve the electrical contact problem described in the Roos '198 Patent by introducing electrically conducting fluid to the tissue site. Rather, the Roos '667 Patent solved the problem of poor conductivity by disclosing a device in which both the cutting and neutral electrodes were in physical contact with the tissue so that current could flow from the cutting electrode, through the tissue, and to the return electrode, not through electrically conducting fluid:

The instrument is first of all placed in accordance with FIG. 1 onto the tissue 16 which is to be separated by means of a cut, with a concave ring-like contact surface 14 being formed between the tissue 16 and the neutral electrode 11 and with a very small funnel-like contact surface 15 being formed between the tip of the cutting electrode 12 and the tissue 16. If the r.f. generator is now switched on then an r.f. current indicated by the current lines 28 flows between the cutting electrode 12 and the neutral electrode 11.

Because the Roos '198 Patent does not disclose or enable electrosurgical ablation in the presence of electrically conductive fluid, it cannot anticipate claims containing such an element. PPG Indus., Inc. v. Guardian Indus. Corp., 75 F.3d 1558, 1566 (Fed. Cir. 1996)

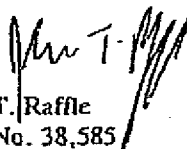
Philip E. Eggers et al.
Serial No. 09/098,205
Page 8

("To anticipate a claim, a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter.").

In light of the above, applicant requests that the Examiner withdraw the rejections over Roos.

Applicant believes that all claims are in condition for allowance. If the Examiner has any questions or concerns regarding this matter, please call the undersigned at 408-736-0224.

Respectfully submitted,


John T. Raffle
Reg. No. 38,585

ArthroCare Corporation
595 N. Pastoria Ave.
Sunnyvale, California 94086
(408) 736-0224.

FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Attorney Docket No. A-2-2		Serial No.: unassigned <i>67/098,305</i>	
3		Applicant: PHILIP E. EGGERS et al.			
		Filing Date: herewith		Group:	

Reference Designation		U.S. PATENT DOCUMENTS				
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (If Appropriate)
<i>82</i> AA	4,040,426	08/09/77	Morrison, Jr.	128	303	
AB	4,116,198	09/26/78	Roos	128	303	
AC	4,548,207	10/22/85	Reimels	128	303	
AD	4,682,596	07/28/87	Bales et al.	128	303	
AE	4,823,791	04/25/89	D'Amelio et al.	123	303	
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AG	5,122,138	06/16/92	Manwaring	606	46	
AH	5,217,457	06/08/93	Delahuerga et al.	606	42	
AI	5,342,357	08/30/94	Naidella	606	40	
AJ	5,176,528	01/05/93	Fry et al.	439	181	
AK	5,080,660	01/14/92	Buelna	606	48	

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	Document No.	Date	Country	Class	Sub-class	Translation (yes/no)
<i>82</i> AL	0 740 926 A2	11/06/96	EP	A63B	17/39	
AM	94/08654	04/28/94	WIPO	A61M	37/00	
AN	0 597 463	05/18/94	EP	A61N	5/04	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)	
<i>82</i> AO	V.E. Eleaner et al. Acta Medico Technica 24(4):129-134 (1976).
AP	M. Buchelt et al. Lasers In Surgery and Medicine 11:271-279 (1991).
EQ	J. Costello Lasers in Surgery and Medicine 12:121-124 (1992)

EXAMINER <i>LSC</i>	DATE CONSIDERED <i>11/8/99</i>
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

United States Patent [19]

Roos

[11] 4,116,198

[45] Sep. 26, 1978

[54] ELECTRO-SURGICAL DEVICE

[75] Inventor: Eberhard Roos, Tuttlingen, Fed. Rep. of Germany

[73] Assignee: DELMA, elektro und medizinische Apparatebau-Gesellschaft m.b.H., Tuttlingen, Fed. Rep. of Germany

[21] Appl. No.: 684,600

[22] Filed: May 14, 1976

[30] Foreign Application Priority Data

May 13, 1975 [DE] Fed. Rep. of Germany 2321719

[51] Int. Cl.² A61B 17/32

[52] U.S. Cl. 128/303.13

[58] Field of Search 128/303.13-303.18

[56] References Cited

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2,002,339	5/1933	Wappler	128/303.15
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932,785	2/1963	United Kingdom	128/303.18

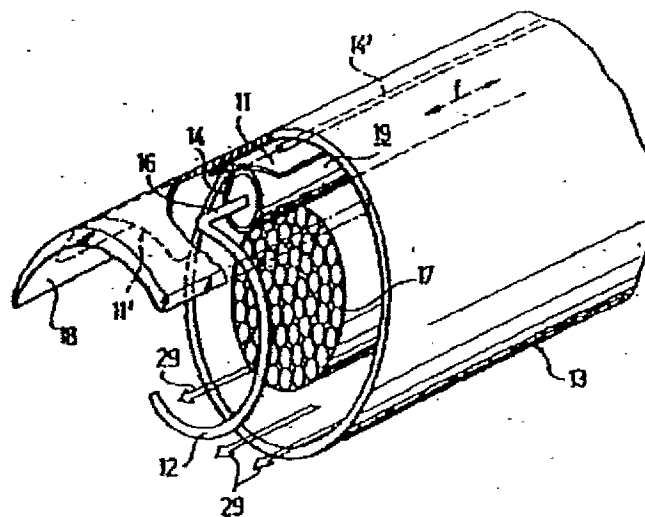
Primary Examiner—Lee S. Cohen

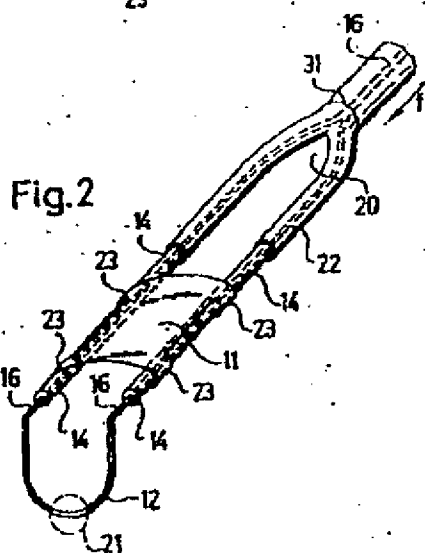
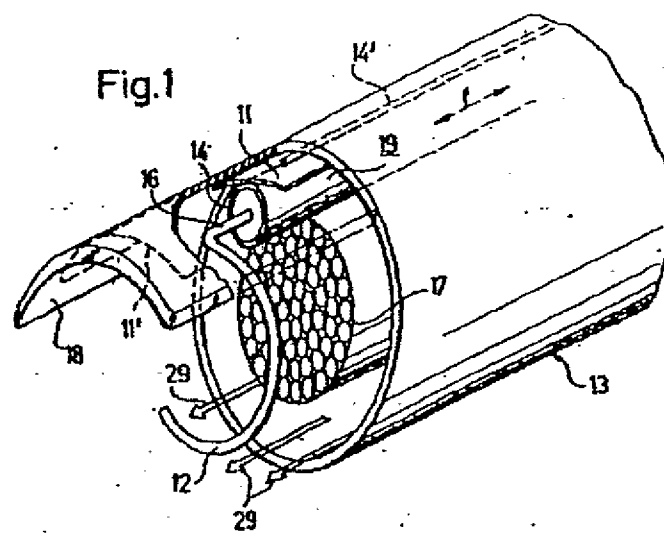
[57]

ABSTRACT

Electro-surgical device with an insulated cable which can be passed through an endoscope, to which can be connected the pole of a high frequency generator, said pole being insulated from earth potential and on whose end facing the body cavity is provided a small-area treatment electrode projecting from the endoscope, said treatment electrode cooperating with a large-area neutral electrode connected to the other pole of the high frequency generator which is insulated from earth potential in such a way that due to the high current density in the area of the treatment electrode, a generation of heat takes place which is adequate for separating or coagulating tissue, wherein the large-area neutral electrode is arranged in the vicinity of the treatment electrode and is connected with the other pole of the high frequency generator by means of an insulated cable which can also be passed through the endoscope.

20 Claims, 9 Drawing Figures





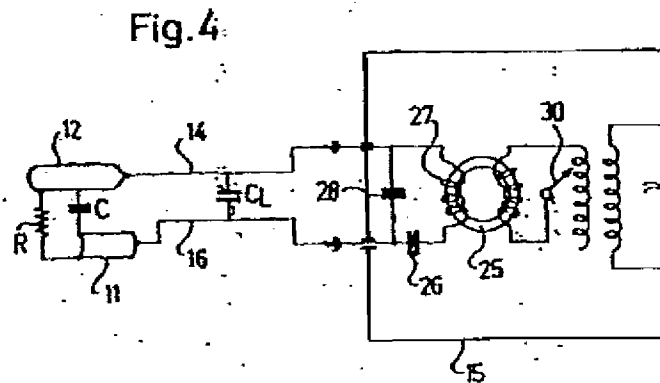
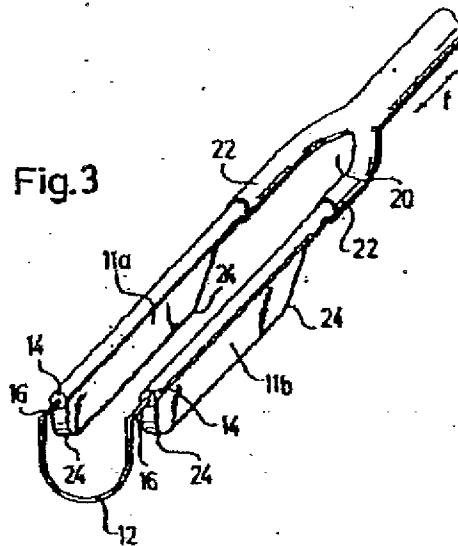


Fig.5

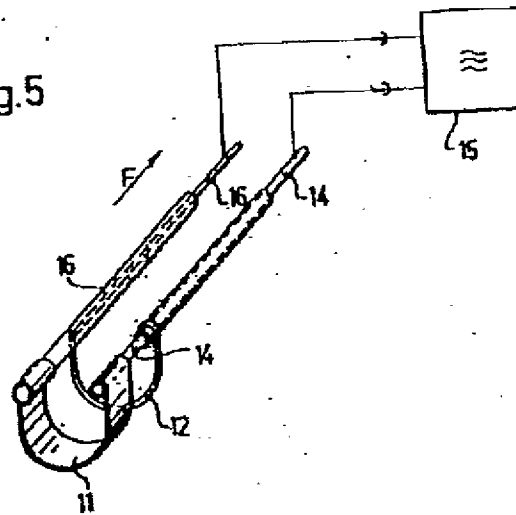
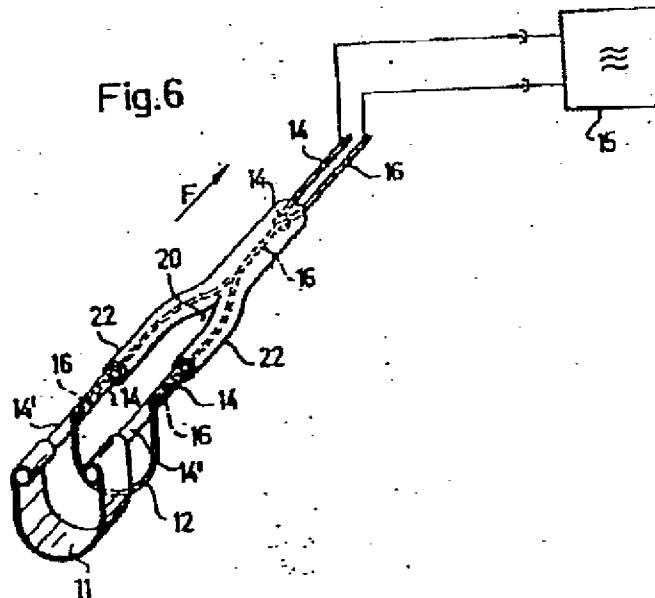
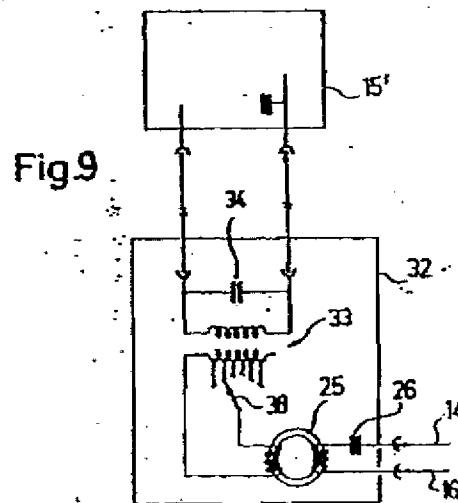
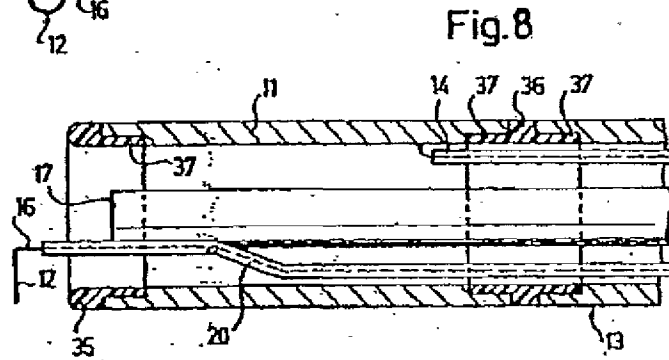
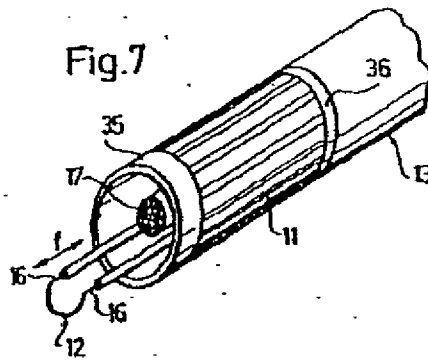


Fig.6





ELECTRO-SURGICAL DEVICE

BACKGROUND OF THE INVENTION

The invention relates to an electro-surgical device with an insulated cable which can be passed through an endoscope, to which can be connected the pole of a high frequency generator, said pole being insulated from earth potential and on whose end facing the body cavity is provided a small-area treatment electrode projecting from the endoscope, said treatment electrode cooperating with a large-area neutral electrode connected to the other pole of the high frequency generator which is insulated from earth potential in such a way that due to the high current density in the area of the treatment electrode, a generation of heat takes place which is adequate for separating or coagulating tissue.

Electro-surgical devices of this type permit electro-surgical operations of the filled bladder (electro-resection, e.g. of bladder tumors and the prostate glands) using endoscopes, particularly resectoscopes and cystoscopes.

The high degree of development in the endoscope field has resulted in operations in the bladder and on the prostate glands using these instruments and by means of electro-surgery have become the most commonly used operating procedure.

In known devices of this type, high frequency alternating current is fed via an earthed neutral electrode on the one hand and via a sparking ball or cutting loop well insulated relative to the outer shaft of the endoscope on the other to the operating area for coagulation purposes in the case of hemorrhages. Due to the relatively small area of the cutting loop compared to the area of the neutral electrode applied externally to the patient's body a very high current density occurs in the area of the cutting loop which results in heat generation in the tissue flaked with the bursting of the tissue cells through steam generation and consequently a separation of the tissues. For the desired cutting or coagulating effects, the necessary power values of the high frequency current applied vary between 120 and 150 W.

As the leads from the high frequency generator to the cutting electrode have to be passed through the metallic endoscope, the distances between the high frequency-carrying lead and the remaining metal parts of the endoscope insulated therefrom are so small that capacitances of considerable size exist between these metal parts. Thus, to a certain extent, the endoscope forms a capacitor via which part of the applied capacity flows away as leakage current onto the tissue engaging with the metal endoscope shaft. A further, still larger portion of the applied capacity flows from the cutting loop via the washing water directly to the metal parts of the endoscope shaft located in the washing water flow and from there to the engaging tissue. Thus, uncontrollable electrical conditions in the urethral tissue engaging with the endoscope and the unequal distribution of lubricants with insulating properties on the endoscope shaft can cause critical current densities when the leakage current passes to the urethra and this results in burns.

These difficulties would not be eliminated by coating the endoscope shaft with tubes of high-grade insulating material, because the slightest damage to the shaft insulation due to the very high current densities occurring during the passage of the leakage current would, in fact, increase the danger of burning due to the damage. However, if the endoscope shaft insulation remains intact,

the entire leakage current is led off to the points where the operator is in contact with the endoscope leading to burns to the operator's face or to the eye in contact with the metal escutcheons of the transparent optical.

Neutral electrode isolation from earth potential cannot prevent the passage of the leakage currents to the operator. As the neutral electrode acts as an opposite pole to the cutting or coagulation electrode between the patient and the earthed operating table, it is capacitively connected to earth potential. Therefore, the cutting loop and the leakage current flows therefrom together with its voltage are earthed. Since, in any case, the operator largely carries the earth potential, the passage of the leakage current to the operator cannot be avoided by the measures in question.

BRIEF SUMMARY OF THE INVENTION

The problem of the invention is therefore to provide an electro-surgical device of the type indicated hereinbefore where undesired burns to the urethra and the operator are effectively avoided.

According to the invention, this problem is solved in that the large-area neutral electrode is arranged in the vicinity of the treatment electrode and is connected with the other pole of the high frequency generator by means of an insulated cable which can also be passed through the endoscope. In this way, potential compensation takes place in a spatially very narrowly defined zone. Both the treatment electrode, preferably constructed as a cutting loop and the neutral electrode carry no potential to earth. Leakage current does not flow to the endoscope shaft either from the high frequency lead to the treatment electrode or from the lead to the neutral electrode. Due to the existing capacitance, leakage currents only flow between the leads, but these do not have any external effects.

However, due to the small-area construction of the treatment electrode, a high current density is obtained there, which is adequate for tissue separation or coagulation, whereas the neutral electrode arranged in the immediate vicinity has such a large area that undesired heating is avoided there.

According to a preferred embodiment, the two feed leads comprise a coaxial cable, whose shield forms one conductor and is insulated relative to the endoscope. Thus, the two high frequency leads for the treatment and neutral electrode form a structural unit, which whilst taking up only a small amount of space, can be simply passed through the endoscope together with the optical and washing portions.

In general, the treatment electrode should be in loop form so that the operator's field of vision is uninterrupted.

According to a further embodiment, the centre conductor of the coaxial cable at the front projects above the shield and at this point passes into the treatment electrode. It is thereby particularly advantageous if the shield is constructed as a rigid sleeve and in such a way that the treatment electrode can be moved backwards and forwards relative to the endoscope via the coaxial cable. Thus, in this embodiment, the coaxial cable at the same time forms the support and operating member for the treatment electrode.

The relatively large neutral electrode is advantageously directly fitted to the coaxial cable shield. In this way the neutral electrode can be mounted reliably and immovably in an inexpensive and uncomplicated manner.

Advantageously, the neutral electrode is constructed as an elongated metal sheet slightly curved about the endoscope shaft and extending on either side over the coaxial cable.

According to a further advantageous embodiment, the endoscope has a plastic extension extending over a small portion only of its periphery, whereby the treatment electrode can be moved back and forth beneath the said extension. This plastic extension has the advantage that the washing liquid can be satisfactorily guided and tissue which is not to be treated can be kept away from the treatment electrode. According to the invention, this extension can be used so that the large-area neutral electrode is fixed in insulated manner relative to the endoscope on the inside of the extension. The neutral electrode is then preferably connected with the high frequency generator by an insulated cable secured in the endoscope. In this case, only the other conductor with its insulation and treatment electrode is axially movable.

According to a particularly preferred embodiment, the coaxial cable has a bifurcation just before the body-side end of the endoscope and the two inner conductors emanating from the bifurcation are interconnected by a loop forming the treatment electrode. This construction is particularly stable due to the symmetry conditions resulting from the bifurcation, whereby at the same time the operator still has good visibility through the cutting loop forming the treatment electrode.

If the treatment electrode is used for coagulation purposes, a coagulation sparking ball is fitted to the treatment electrode.

The coaxial cable is advantageously surrounded by an insulating lead so as to prevent any connection of the endoscope metal with the high frequency voltage. Preferably, the insulating sleeve of the bifurcated coaxial cable is also bifurcated, but it extends only to just in front of the neutral electrode.

In the case of the bifurcated coaxial cable, the neutral electrode is preferably an elongated metal sheet, bent slightly around the endoscope shaft and extending from one branch of the bifurcation to the other. The sheet can have projections at the four corners which are placed around the shield. Depending on the degree of placing around and also clamping, any desired fixing of the neutral electrode to the coaxial cable can be obtained.

The current density in the area of the operating zone is advantageously influenced if the neutral electrode terminates at a distance from the end of the shield.

According to a further advantageous embodiment, the neutral electrode comprises two partial electrodes extending in the direction of the loop away from the two arms of the bifurcation. Preferably, the partial electrodes do not extend quite as far from the shields as the loop. At the front and rear ends the sheets preferably have rounded portions.

As a result of the slide-like construction, the operator can reliably guide the endoscope by placing the slide-like sheet projections on the tissue to then be removed. As is known, the endoscope is operated in such a way that the cutting loop is moved forwards relative to the endoscope, made live and then slowly retracted, whereby the tissue is removed by the heating on the cutting loop.

As stated hereinbefore, the treatment electrode and neutral electrode are appropriately so shaped and posi-

tioned that the illumination, vision and washing operations are not impaired by the endoscope.

Advantageously, the leads are inductively connected to the high frequency generator, whereby advantageously, a capacitor for filtering out low frequency voltage portions is preferably provided in one lead. This, in advantageous manner avoids faradic effects in the muscular system of the patient.

A capacitor is appropriately connected in parallel to the output winding of the transmitter which with the inductor of the latter forms an oscillating circuit which is tuned in such a way that the attenuation in the oscillating circuit formed by the leads, treatment electrode and neutral electrode is minimal.

BRIEF DESCRIPTION OF THE DRAWINGS

Other and further objects of the present invention will be apparent from the following description and claims and are illustrated in the accompanying drawings which, by way of illustration show preferred embodiments of the present invention and the principles thereof and what are now considered to be the best modes contemplated for applying these principles. Other embodiments of the invention embodying the same or equivalent principles may be used and structural changes may be made if desired by those skilled in the art without departing from the invention and the scope of the appended claims.

In the drawings show:

FIG. 1 a schematic, greatly enlarged perspective view of the front end of an endoscope equipped with the electro-surgical device according to the invention.

FIG. 2 a perspective view of a further embodiment of the electro-surgical device according to the invention, without the endoscope surrounding the same.

FIG. 3 a further embodiment of the electro-surgical device according to the invention, once again without a surrounding endoscope.

FIG. 4 a schematic circuit diagram of the electro-surgical device according to the invention with a particularly suitable high frequency generator.

FIGS. 5 and 6 perspective views of two further advantageous embodiments.

FIGS. 7 and 8 a perspective view and an axial section of a further advantageous embodiment.

FIG. 9 a schematic circuit diagram of an additional device for the device according to the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

According to FIG. 1, an endoscope 13 is axially traversed in conventional manner by a fibre optical system 17, which is spaced relative to the sides of the endoscope 13, in such a way that washing liquid can pass through there (arrow 29) and there still remains space for the axial insertion of an electro-surgical treatment device.

According to the invention, this electro-surgical treatment device comprises a coaxial cable 19 with right metallic shield 14 and an inner conductor 16 axially inserted together with the fibre optical system 17. Inside the metallic shaft of the endoscope 13, the shield 14 is covered in not shown manner with an insulating sleeve 22, shown in the case of the constructions of FIGS. 2 and 3.

At the front, inner conductor 16 projects somewhat from the coaxial cable 19 and passes into the treatment electrode 12, which in general comprises a loop ensur-

ing free visibility for the operator via the fibre optical systems 17.

The opposite electrode for the cutting electrode 12 is formed by a neutral electrode 11 fixed in electrically conductive manner to shield 14 and which is curved somewhat about the endoscope shaft, having a rectangular, elongated form shown in FIG. 1. Inner conductor 16 and shield 14 are connected, as shown in FIG. 4 to the two poles of a high frequency generator 15 which are not at earth potential.

At the front end of the metal shaft of the endoscope 13 is fixed a plastic extension 18, which is rounded and extends in the manner shown in FIG. 1, so as not to impair insertion, for example into the urethra. As the plastic extension 18 is an insulating body, the large-area neutral electrode 11 can also be fitted to the inside. It is then appropriately connected with the associated pole of the high frequency generator via a separate insulated conductor 14' in the endoscope, inside of via the shield 14.

As a result of the construction according to the invention, a high frequency field is only formed between shield 14 and inner conductor 16, as well as between neutral electrode 11 and treatment electrode 12, as is shown schematically in FIG. 4 by capacitors C_1 and C_2 . Due to the current conduction through the tissue fluid and tissue itself, a true resistor R is also conceivable parallel to the capacitor between neutral electrode 11 and treatment electrode 12.

The supply to connect neutral electrode 11 and the treatment electrode 12 takes place by the inductive coupling of a high frequency voltage by means of a transformer 23, whose input voltage is regulatable by a variable tap 24. Due to the inductive coupling, the output lines 14 and 16 are galvanically isolated from earth potential.

A capacitor 26 connected in lead 16 is used for filtering out the low frequency current and therefore avoids harmful effects in the muscular system of the patient. A capacitor 27 connected in parallel to the output winding 27 of transformer 23 and behind capacitor 26 forms with the output winding an oscillating circuit tuned in such a way that the attenuation in the oscillating circuit formed from C_1 , C_2 and R as well as the inductors of lines 14, 16 is minimal.

As a result of the construction according to the invention, the leakage currents only flow between lines 14, 16 and therefore do not reach the metal shaft of endoscope 13. Thus, larger current densities such as are necessary for tissue separation or coagulation only occur outside the endoscope in the operating area.

Therefore, the danger of heating outside the desired area, as well as burn to the operator is reliably avoided.

FIG. 2 shows a particularly advantageous embodiment of the electro-surgical device according to the invention in which both the inner conductor 16 and the shield 14 have a bifurcation 28. In the same way, the insulating sleeve drawn over the shield 14 is bifurcated. The production of such a bifurcation is advantageously obtained by a welded joint at point 31 indicated by a line.

As a result of the bifurcation shown in FIG. 2, a cutting loop 12 can be arranged in the shown manner between the two inner conductors 16 extending at the end. If the treatment electrode is to be used for coagulation, a coagulation sparking ball 21 can be provided on loop 12.

The construction of FIG. 2 is particularly well suited to the arrangement of a relatively large-area neutral electrode 11 which appropriately extends between the shields 14 of the two branches of the bifurcation 28, being slightly bent about the endoscope shaft. At the end, the neutral electrode 11 has projections 23 which are securely placed around the shields 14 for securing neutral electrodes 11 and for supplying the same with voltage. The metal sheeting forming the neutral electrode simultaneously constructionally reinforces the bifurcation 28, so that the guidance of the treatment electrode 12 by the operator is aided. As is known, the axial movement of the electro-surgical device in the direction of the double arrow / takes place by operating a pistol-like handle on endoscope 13, not shown in the drawing.

A further advantageous embodiment is shown in FIG. 3 where the neutral electrode is broken up into two partial electrodes 11a, 11b, which in the represented manner are soldered or welded to the shields 14 in such a way that the partial electrodes extend in the same direction as cutting loop 12. Rounded portions 24 are provided at both ends. The partial electrodes 11a, 11b applied to the shields 14 in this way thus additionally form slide-like support, by means of which the electro-surgical device can be placed on the tissue to be removed. This not only ensures a reliable guidance of the device but also ensures that the tissue is removed to the predetermined depth. The electrical advantages of limiting current conduction to the operating area are completely maintained.

FIG. 5 shows a further advantageous embodiment, whereby only the front part of the electro-surgical device without the endoscope is shown. In this embodiment, two insulated cables with inner conductors 14, 16 are passed from high frequency generator 15 through the endoscope. At the front end are successively arranged the cutting loop 12 and the neutral electrode 11 constructed as a steel band. The cutting loop 12 is electrically conductively connected with the inner conductor 16, but at the other end is only fixed to the insulation surrounding the conductor 14. Conversely, the steel band 11, whose shape is similar to the cutting loop 12, is connected in electrically conductive and mechanically secure manner with the inner conductor 14, whilst the opposite end is mechanically secured to the insulation of the inner conductor 16. Since, according to the invention, the steel band 11 has the same radius as the wire loop, on retracting the loop 12 in the direction of arrow F, the band does not form an obstacle to the tissue portions removed by the loop. The neutral electrode 11 in the form of the steel band rests on the tissue in large-area form, so that good electrical contact is ensured.

FIG. 6 shows an embodiment which is substantially the same as FIG. 5, whereby however, a bifurcated coiled cable, similar to FIGS. 2 and 3 is used. The wire loop 12 is once again fixed to the inner conductors 16, whilst the neutral conductor 11 in band form is mechanically secured to extensions 14' electrically connected with the shield 14.

In the embodiment according to FIGS. 7 and 8, the front portion of endoscope 13 itself or a coaxial connection attached thereto at the front is constructed as the neutral electrode 11. To this end, the front portion is electrically insulated relative to the rear portion or the front-fixed connection from endoscope 13 by an immediately inserted insulating ring 36. The cutting loop 12 can at the front be passed out of the neutral electrode

11 in one of the above-described manners. In the present embodiment, two leads 16 pass outwards from the cylindrical neutral electrode 11, which at 28 are combined to form a single cable, leading to the rear end of endoscope 13. The neutral electrode 11 is connected via a further insulated cable 14 to the high frequency generator 15 not shown in FIGS. 7 and 8.

It is also important in the case of the embodiment of FIGS. 7 and 8 that the cutting loop extends radially up to an insulating ring 35 mounted at the front on the neutral electrode 11 and can be retracted up to this. In this way, the front edge of the endoscope shaft, namely the front edge of the insulating ring 35 serves as a support for the cutting loop 12, so that the material is reliably removed therefrom. Therefore, as shown the insulating ring 35 must be rounded at the front.

Preferably, the insulating rings 33, 34 have axial attachments 37 with a reduced external diameter, by means of which a mechanically secure fixing to the metal tubes is ensured.

FIG. 9 shows an additional device 31, by means of which a conventional high frequency surgical apparatus 15' with an earthed output terminal can be made usable for the purposes of the invention. The additional device 32 connected to the high frequency apparatus 15' has at the inlet a transformer 33 with parallel-connected capacitor 34 for tuning to the resonant frequency of the output circuit of the high frequency apparatus 15'. The output winding of transformer 33 is preferably regulatable by means of a loop arm 38 in such a way that the inductive output transformer 25 can receive voltages of varying sizes.

Via a capacitor 26, the output winding of transformer 25 is applied to the two output terminals of the additional device 32, where the leads 34, 14 can be applied.

In this way the high frequency apparatus 15' acquires an output with fluctuating potential, as is necessary for the correction of the electro-surgical device according to the invention.

The invention is not limited to the embodiments described and represented hereinbefore and various modifications can be made thereto without passing beyond the scope of the invention.

What is claimed is:

1. In combination: an endoscope having an endoscope body of substantially tubular shape, and an electro-surgical device comprising a treatment electrode projecting at one end from said endoscope body and a neutral electrode arranged adjacent said treatment electrode, insulated cable means for connecting said treatment electrode to one pole of a high-frequency generator, and means for connecting said neutral electrode to the other pole of a high-frequency generator, said endoscope body having an insulating projection extending over a portion of the periphery of said endoscope body at said one end and having a front edge, said neutral electrode being located within said endoscope body and spaced a distinct distance inwardly from said front edge, a space being formed between said treatment electrode and said neutral electrode which is adapted to be filled with liquid to provide electrical conductance between said electrodes.

2. The combination of claim 1, wherein said insulated cable means and said means for connecting said neutral electrode to said other pole comprise coaxial cable means with shielding means forming one of said connecting means and being insulated relative to said endoscope body.

3. The combination according to claim 2, wherein said shielding means is constructed as a rigid sleeve in which said treatment electrode is adapted to be moved back and forth relative to said endoscope body through said coaxial cable means.

4. The combination according to claim 2, wherein said neutral electrode is fixed directly to said shielding means of said coaxial cable means.

5. The combination according to claim 4, wherein the neutral electrode is constructed as an elongated metal sheet slightly bent within said endoscope body and extending over said coaxial cable means.

6. The combination according to claim 2, comprising an insulating sleeve surrounding said coaxial cable means.

7. The combination according to claim 6, wherein said insulating sleeve is bifurcated and extends approximately to said neutral electrode.

8. The combination according to claim 7, wherein said neutral electrode is an elongated metal sheet slightly bent within said endoscope body and extending from one branch of said bifurcated insulating sleeve to the other.

9. The combination according to claim 8, wherein said sheet has projections at its four corners, two each of which are placed around the respective branches of said bifurcated sleeve.

10. The combination according to claim 1, wherein said neutral electrode terminates at a distance from said shielding means.

11. The combination according to claim 1, wherein said neutral electrode is secured to and insulated from said endoscope body on the inside of said insulating projection.

12. The combination according to claim 1, wherein said means for connecting said neutral electrode to said high-frequency generator is an insulated conductor secured in said endoscope body.

13. The combination according to claim 2, wherein said coaxial cable means has a bifurcation at that end of the endoscope body adjacent said projection, two inner conductors extending from said bifurcation, and a loop interconnecting said two inner conductors and forming said treatment electrode.

14. The combination according to claim 1, wherein a coagulation sparking ball is fitted to said treatment electrode.

15. The combination according to claim 1, comprising a high-frequency generator, and wherein said cable means and said connecting means are inductively coupled to said high-frequency generator.

16. The combination according to claim 15, wherein a capacitor is connected in one of said cable means and said connecting means for filtering out low-frequency voltage.

17. The combination according to claim 15, wherein said generator comprises a transformer with an output winding having an inductor, a capacitor being connected parallel to said output winding and forming an oscillating circuit with said inductor, said circuit being tuned such that the attenuation in said circuit formed by said cable means, said connecting means, treatment electrode and neutral electrode is minimal.

18. The combination according to claim 15, comprising means for potential isolation connected between said high-frequency generator and said cable means and said connecting means respectively.

19. The combination according to claim 18, wherein said potential isolation means comprises a transformer, a capacitor connected parallel to said transformer, said high-frequency generator having an output circuit, said

transformer and said output circuit being tuned in resonance.

20. The combination according to claim 19, comprising an inductive transformer connected to said transformer, said cable means and said connecting means being connected to said inductive transformer.
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FORM PTO-1449 (Modified)		Attorney Docket No. A-2-2		Serial No.: unassigned 09/09/95		
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant: PHILIP E. EGGERS et al.				
		Filing Date: herewith		Group:		
Reference Designation U.S. PATENT DOCUMENTS						
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (if Appropriate)
<input checked="" type="checkbox"/> AR	5,197,963	03/30/93	Parina	606	46	
<input type="checkbox"/> AS	5,267,994	12/07/93	Gentelia et al.	606	15	
<input type="checkbox"/> AT	5,273,524	12/28/93	Fox et al.	604	21	
<input type="checkbox"/> AU	5,300,069	04/05/94	Hunsberger et al.	606	37	
<input type="checkbox"/> AV	5,312,400	05/17/94	Bales et al.	606	41	
<input type="checkbox"/> AW	5,314,406	05/24/94	Arias et al.	604	21	
<input type="checkbox"/> AX	5,324,254	06/28/94	Phillips	604	21	
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FOREIGN PATENT DOCUMENTS						
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<input checked="" type="checkbox"/> AZ	91/13650	09/19/91	WIPO	A61N	5/04	
<input type="checkbox"/> BA	94/04220	03/03/94	WIPO	A61N	1/06	
<input checked="" type="checkbox"/> BB	94/26228	11/24/94	WIPO	A61G	17/36	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)						
<input checked="" type="checkbox"/> BC	P. Nardella SPIE 1068:42-49 (1989).					
<input checked="" type="checkbox"/> BD	Rand et al. J. Arthro. Surg. 1:242-246 (1985).					
EXAMINER <i>[Signature]</i> DATE CONSIDERED 11/95						

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (Modified)		Attorney Docket No. A-2-2		Serial No.: unassigned 69/678,355		
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant: PHILIP E. EGGERS et al.				
		Filing Date: herewith		Group:		
Reference Designation U.S. PATENT DOCUMENTS						
Examiner Initial	Document No.	Date	Name	Class	Sub- class	Filing Date (if Appropriate)
BE	5,334,183	08/02/94	Wuchinich	606	46	
BF	5,336,220	08/09/94	Ryan et al.	604	22	
BG	5,342,357	08/30/94	Nardella	606	40	
BH	5,380,277	01/10/95	Phillips	604	33	
BI	5,383,876	01/24/95	Nardella	606	49	
BJ	5,395,312	03/07/95	Desai	604	22	
BK	5,057,106	10/15/91	Kasevich et al.	606	33	
BL	4,860,752	08/29/89	Turner	128	422	
BM	5,007,908	04/16/91	Rydell	606	47	
BN	5,609,151	03/11/97	Mulier et al.	128	642	
BO	5,725,524	03/10/98	Mulier et al.	606	41	
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	Document No.	Date	Country	Class	Sub- class	Translation (yes/no)
BP	97/80646	01/09/97	WIPO	A61B	17/39	
BQ	97/80647	01/09/97	WIPO	A61B	17/39	
BR	0 703 461 A2	03/27/96	EP	G01R	27/02	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)						
BS	S.V. Kramolowsky et al. J. of Urology Vol. 143, pp. 275-277 (1990).					
BT	J.W. Ramsey et al. Urological Research Vol. 13, pp. 99-102 (1985).					
EXAMINER <i>[Signature]</i> DATE CONSIDERED 11/8/98						

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FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Attorney Docket No. A-2-2	Serial No.: unassigned <i>38/278,100</i>
Applicant: PHILIP E. EGGERS et al.		Filing Date: herewith	Group:

U.S. PATENT DOCUMENTS						
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (if appropriate)
<i>BU</i>	4,240,441	12/23/80	Khalil	128	692	
<i>BV</i>	4,736,743	04/12/88	Daikuzono	128	303.1	
<i>BW</i>	4,737,678	04/12/88	Hasegawa	313	36	
<i>BX</i>	4,762,128	08/09/88	Rosenbluth	128	343	
<i>BY</i>	4,785,806	11/22/88	Deckelbaum	128	303.1	
<i>BZ</i>	4,813,429	03/21/89	Eshel et al.	128	736	
<i>CA</i>	4,967,765	11/06/90	Turner et al.	128	785	
<i>CB</i>	4,968,314	11/06/90	Michaels	606	007	
<i>CC</i>	5,007,437	04/16/91	Sterzer	428	786	
<i>CD</i>	5,037,421	08/06/91	Boutacoff et al.	606	15	
<i>CE</i>	5,061,266	10/29/91	Rakky	606	15	
<i>CF</i>	5,078,717	01/07/92	Parins et al.	606	48	
FOREIGN PATENT DOCUMENTS						
	Document No.	Date	Country	Class	Sub-class	Translation (yes/no)
<i>CG</i>	0 740 926	11/06/96	EP	A61B	17/39	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)						
<i>CH</i>	R. Tucker et al., Abstract P14-11, p. 248, "A Bipolar Electrosurgical Turp Loop"					
<i>CI</i>	R. Tucker et al. J. of Urology Vol. 141, pp. 662-665, (1989).					
<i>CJ</i>	R. Tucker et al. Urological Research Vol. 18, pp. 291-294 (1990).					
EXAMINER <i>LSC</i>		DATE CONSIDERED <i>1/18/91</i>				

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Applicant: PHILIP E. EGGERS et al.		Filing Date: herewith		Group:	

U.S. PATENT DOCUMENTS						
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (if appropriate)
2-CK	5,112,330	05/12/92	Nishigaki et al.	606	46	
CL	5,125,928	06/30/92	Parins et al.	606	48	
CH	5,147,354	09/15/92	Boutacoff et al.	606	15	
CN	5,151,098	09/29/92	Loertscher	606	16	
CO	5,249,585	10/05/93	Turner et al.	607	99	
CP	5,267,997	12/07/93	Farin et al.	606	38	
CQ	5,281,216	01/25/94	Klicek	606	42	
CR	5,281,218	01/25/94	Imran	606	41	
CS	5,300,099	04/05/94	Rudie	607	101	
CT	5,301,687	04/12/94	Hong et al.	607	116	
CU	5,322,507	06/21/94	Costello et al.	128	4	
CV	5,326,343	07/05/94	Rudie et al.	607	101	
CW	5,366,443	11/22/94	Eggers et al.	604	114	
CX	5,330,518	07/19/94	Neilson et al.	607	101	

FOREIGN PATENT DOCUMENTS						
Document No.	Date	Country	Class	Sub-class	Translation (yes/no)	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)	

EXAMINER <i>gsc</i>	DATE CONSIDERED 11/8/94
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)				Attorney Docket No. A-2-2		Serial No.: herewith	
				Applicant: PHILIP E. EGGERS et al.			
				Filing Date: herewith		Group:	
Reference Designation U.S. PATENT DOCUMENTS							
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (if appropriate)	
<u>2</u> CY	4,184,492	01/22/80	Meinke et al.	128	303		
— CZ	4,248,231	02/03/81	Herczog et al.	128	303		
— DA	4,706,567	11/17/87	Roos	128	303		
— DB	5,190,517	03/02/93	Zieve et al.	604	22		
— DC	5,370,575	12/06/94	Edwards et al.	607	101		
— DD	5,417,687	05/23/95	Nardella et al.	606	32		
— DE	5,423,882	06/13/95	Jackman et al.	607	122		
— DF	4,326,529	04/27/82	Doss	128	303.1		
— DG	4,381,007	04/26/83	Doss	128	303.1		
— DH	4,476,862	10/16/84	Pao	128	303.17		
— DI	4,532,924	08/06/85	Auth et al.	128	303.17		
— DJ	4,567,890	02/04/86	Ohta et al.	128	303.13		
— DK	4,593,691	06/10/86	Lindstrom et al.	128	303.14		
— DL	4,931,047	06/05/90	Broadwin et al.	604	22		
— DM	4,936,301	06/26/90	Rexroth et al.	606	45		
— DN	4,943,290	07/24/90	Rexroth et al.	606	45		
— DO	4,979,948	12/25/90	Geddes et al.	606	33		
FOREIGN PATENT DOCUMENTS							
	Document No.	Date	Country	Class	Sub-class	Translation (yes/no)	
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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
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EXAMINER <u>Ludger</u>	DATE CONSIDERED <u>11/19/95</u>						

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Applicant: PHILIP E. EGGERS et al.		Filing Date: herewith	Group:

Reference Designation		U.S. PATENT DOCUMENTS				
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (if appropriate)
<input checked="" type="checkbox"/> EK	5,217,455	06/08/93	Tan	606	9	
<input type="checkbox"/> EL	5,423,803	06/13/95	Tankovich	606	9	
<input type="checkbox"/> EM	5,102,410	04/07/92	Dressel	606	15	
<input type="checkbox"/> EN	5,282,797	02/01/94	Chess	606	9	
<input type="checkbox"/> EO	5,290,273	03/01/94	Tan	606	9	
<input type="checkbox"/> EP	5,304,170	04/19/94	Green	606	9	
<input type="checkbox"/> EQ	5,312,395	05/17/94	Tan et al.	606	9	
<input type="checkbox"/> ER	5,336,217	08/09/94	Buya et al.	606	9	
<input type="checkbox"/> ES	5,445,614	08/29/95	Keller	606	9	
<input type="checkbox"/> ET	5,370,642	12/06/94	Keller	606	9	
<input type="checkbox"/> EU	5,261,410	11/16/93	Alfano et al.	128	664	
<input type="checkbox"/> EV	5,380,316	01/10/95	Aita et al.	606	7	
<input type="checkbox"/> EW	4,658,817	04/21/87	Hardy	128	303	
<input type="checkbox"/> EX	5,389,096	02/14/95	Aita et al.	606	15	
<input type="checkbox"/> EY	4,976,711	12/11/90	Parins et al.	606	48	
<input type="checkbox"/> EZ	5,383,917	01/24/95	Desai et al.	607	702	

FOREIGN PATENT DOCUMENTS						
	Document No.	Date	Country	Class	Sub-class	Translation (yes/no)
<input checked="" type="checkbox"/> FA	WO 90/07303	07/12/90	WIPO	A61B	17/39	
<input checked="" type="checkbox"/> FB	WO 93/20747	10/28/93	WIPO	A61N	1/06	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)	

EXAMINER <i>P. J. C.</i>	DATE CONSIDERED <i>11/8/96</i>
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)			Attorney Docket No. A-2-2		Serial No.: herewith	
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			Filing Date: herewith		Group:	
Reference Designation U.S. PATENT DOCUMENTS						
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (If Appropriate)
DP	5,009,656	04/23/91	Reimels	606	48	
DQ	5,108,391	04/28/92	Flächenecker et al.	606	38	
DR	5,195,959	03/23/93	Smith	604	34	
DS	5,277,201	01/11/94	Stern	607	98	
DT	5,290,282	03/01/94	Casacells	606	29	
DU	5,569,242	10/29/96	Lax et al.	606	42	
DV	4,228,800	10/21/80	Degler, Jr. et al.	128	303	
DW	4,998,933	03/12/91	Eggers et al.	606	41	
DX	5,281,216	01/25/94	Klicek	606	42	
DY	4,943,290	07/24/90	Rexroth et al.	606	45	
DZ	4,936,301	06/26/90	Rexroth et al.	606	45	
EA	4,593,691	05/10/86	Lindstrom et al.	128	303	
EB	4,202,337	05/13/80	Hren et al.	128	303	
EC	5,195,959	03/23/93	Smith	604	34	
ED	4,674,499	06/23/87	Pao	128	303	
FOREIGN PATENT DOCUMENTS						
	Document No.	Date	Country	Class	Sub-class	Translation (yes/no)
EF	WO 90/07303	07/12/90	PCT	A61B	17/39	
EG	WO 92/21278	12/10/92	PCT	A61B	5/04	
EH	WO 93/13816	07/22/93	PCT	A61B	17/36	
EI	WO 94/14383	07/07/94	PCT	A61B	17/36	
EJ	EP 515 867	12/02/92	Europe	A61B	17/36	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)						
EXAMINER <i>[Signature]</i>			DATE CONSIDERED <i>11/21/99</i>			

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				Applicant: PHILIP E. EGGERS et al.			
				Filing Date: herewith		Group:	
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Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (if appropriate)	
<input checked="" type="checkbox"/> EK	5,217,455	06/08/93	Tan	606	9		
<input checked="" type="checkbox"/> EL	5,423,803	06/13/95	Tankovich	606	9		
<input checked="" type="checkbox"/> EM	5,102,410	04/07/92	Dressel	606	15		
<input checked="" type="checkbox"/> EN	5,282,797	02/01/94	Chess	606	9		
<input checked="" type="checkbox"/> EO	5,290,273	03/01/94	Tan	606	9		
<input checked="" type="checkbox"/> EP	5,304,170	04/19/94	Green	606	9		
<input checked="" type="checkbox"/> EQ	5,312,395	05/17/94	Tan et al.	606	9		
<input checked="" type="checkbox"/> ER	5,336,217	08/09/94	Buys et al.	606	9		
<input checked="" type="checkbox"/> ES	5,445,634	08/29/95	Keller	606	9		
<input checked="" type="checkbox"/> ET	5,370,642	12/06/94	Keller	606	9		
<input checked="" type="checkbox"/> EU	5,261,410	11/16/93	Alfano et al.	128	664		
<input checked="" type="checkbox"/> EV	5,380,316	01/10/95	Aita et al.	606	7		
<input checked="" type="checkbox"/> EW	4,658,817	04/21/87	Hardy	128	303		
<input checked="" type="checkbox"/> EX	5,389,096	02/14/95	Aita et al.	606	15		
<input checked="" type="checkbox"/> EY	4,976,711	12/11/90	Parins et al.	606	48		
<input checked="" type="checkbox"/> EZ	5,383,917	01/24/95	Desai et al.	607	702		
FOREIGN PATENT DOCUMENTS							
	Document No.	Date	Country	Class	Sub-class	Translation (yes/no)	
<input checked="" type="checkbox"/> FA	WO 90/07303	07/12/90	WIPO	A61B	17/39		
<input checked="" type="checkbox"/> FB	WO 93/20747	10/28/93	WIPO	A61N	1/06		
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
EXAMINER <i>[Signature]</i>				DATE CONSIDERED <i>11/9/91</i>			

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FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Attorney Docket No. A-2-2		Serial No.: herewith	
Applicant: PHILIP E. EGGERS et al.					
Filing Date: herewith				Group:	

Reference Designation		U.S. PATENT DOCUMENTS				
Examiner Initial	Document No.	Date	Name	Class	Sub- class	Filing Date (if Appropriate)
PC	4,765,331	08/23/88	Petruzzi et al.	128	303	
FD	5,057,105	10/15/91	Malone et al.	606	28	
FE	4,967,765	11/6/90	Turner et al.	128	785	
FF	4,532,924	08/06/85	Auth et al.	128	303	
FG	5,454,809	10/03/95	Janssen	606	41	
FH	5,178,620	01/12/93	Eggers et al.	606	41	
FI	5,366,443	11/22/94	Eggers et al.	606	114	
FJ	5,419,767	05/30/95	Eggers et al.	604	114	
FK	4,709,698	12/01/87	Johnston et al.	128	303	
FL	2,050,904	08/11/96	Trice			
FM	4,955,377	09/11/90	Lennox et al.	128	401	
FN	5,083,565	01/28/92	Parins	128	642	
FO	4,202,337	05/13/80	Hren et al.	128	303.14	
FP	4,228,800	10/21/80	Degler, Jr. et al.	128	303.14	
FQ	4,593,691	06/10/86	Lindstrom et al.	128	303.14	
FR	4,936,301	06/26/90	Rexroth et al.	606	45	

FOREIGN PATENT DOCUMENTS						
Document No.	Date	Country	Class	Sub- class	Translation (yes/no)	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)	

EXAMINER <i>P. J. C.</i>	DATE CONSIDERED <i>11/5/96</i>
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPRP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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11111111
OR INVENTOR'S SUPPLY FOR
SEE IN POSTER IN CASE
SUNNYVALE CA 94088

EXAMINER

ART UNIT	PAPER NUMBER
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DATE MAILED:

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No. 091098,285	Applicant(s) Eggars et al
Examiner Lee S. Cohen	Group Art Unit 3739

☒ Responsive to communication(s) filed on May 25, 2000

☒ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 80, 81, and 83-158 is/are pending in the application.
- Of the above, claim(s) 103-137 is/are withdrawn from consideration.
- ☒ Claim(s) 80, 81, 83-89, 93-101, and 138-155 is/are allowed.
- ☒ Claim(s) 90-92, 102, and 156-158 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- *Certified copies not received: _____
- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☐ Notice of References Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 12
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 3739

Claims 103-137 stand withdrawn from further consideration by the examiner, 37 CFR 1.142(b) as being drawn to a non-elected invention. Election was made without traverse in Paper No. 6. These claims should be cancelled.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 90-92, 102, and 156-158 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 90 - "the active return electrode" in lines 1-2 and "the active electrode" in line 3 lack antecedent basis. Claim 102 - "the active electrode" lacks antecedent basis. Claim 156 - "the electrode terminal" lacks antecedent basis. Claims 157 and 158 - "the delivering step" lacks antecedent basis. Claim 159 - the probe and its recited elements lack antecedent basis.

Claims 80, 81, 83-89, 93-101, and 138-155 are allowed.

Claims 90-92, 102, and 156-158 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

Application/Control Number: 09/098,205

Page 3

Art Unit: 3739

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Lee S. Cohen at telephone number (703) 308-2998.



Lee Cohen
Primary Examiner



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

11/1/2004
SECTION 301, PURSUIT TO
35 USC 301, PURSUIT TO
SUBMITTABLE ON 340-45-2706

11/1/2004

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
11/1/2004, 295	07/27/2004	105	CHEN, L	3/20/04 09/26/00
File Name Applicant	FISHERS.	B-150 (15th) term ext. 1 0 days.		

TITLE OF INVENTION: METHODS AND MEANS FOR HIGH-RESOLUTION TISSUE TREATMENT IN
COMPUTATIONAL FLUID

ATTO DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLX TYPE	SMALL ENTITY	FEE DUE	DATE DUE
3 A-2-2	000-041, 000	500	1011111	NO	\$1236.00	12/26/00

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT.
PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS
APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.

HOW TO RESPOND TO THIS NOTICE:

- I. Review the SMALL ENTITY status shown above.
If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status.
A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

- II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.
- III. All communications regarding this application must give application number and batch number.
Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PATENT AND TRADEMARK OFFICE COPY

PTO-45 (REV. 10-99) Approved for use through DISCLOS. (1001-0023)

SERIAL NUMBER	90/005,601	FILING DATE	12/30/99	CLASS	604	GROUP ART UNIT	3762	ATTORNEY DOCKET NO.																			
<p>5697536, ARTHROCARE CORPORATION, BURLINGAME, CA.</p> <p>CONTINUING DOMESTIC DATA*****</p> <p>VERIFIED THIS APPLN IS A RMX OF 08/746,800 11/18/96 PAT 5,697,536</p> <p>WHICH IS A DIV OF 08/485,219 06/07/95 PAT 5,697,281</p> <p>WHICH IS A CIP OF 08/446,767 06/01/95 PAT 5,697,909</p> <p>WHICH IS A CIP OF 08/059,681 05/10/93 ABN</p> <p>WHICH IS A CIP OF 07/958,977 10/09/92 PAT 5,166,441</p> <p>WHICH IS A CIP OF 07/817,575 01/07/92 ABN</p> <p>371 (NAT'L STAGE) DATA*****</p> <p>VERIFIED</p> <p>FOREIGN APPLICATIONS*****</p> <p>VERIFIED</p> <p>IF REQUIRED, FOREIGN FILING LICENSE GRANTED 01/05/00</p> <table border="1"> <tr> <td>Foreign Priority claimed 35 USC 113 (a-d) conditions met</td> <td><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</td> <td>STATE OR COUNTRY</td> <td>SHEETS DRAWING</td> <td>TOTAL CLAIMS</td> <td>INDEPENDENT CLAIMS</td> </tr> <tr> <td>Verified and Acknowledged</td> <td>Foreign Office</td> <td>OTHER</td> <td>0</td> <td>64</td> <td>3</td> </tr> </table> <p>ADDRESSES</p> <p>JAMES H. HEBLIN TOWNSEND AND TOWNSEND AND CREW 20TH FLOOR STEWART STREET TWR ONE MARKET PLAZA SAN FRANCISCO CA 94105-1492</p> <p>TITLE</p> <p>SYSTEM AND METHOD FOR ELECTROSURGICAL CUTTING AND ABLATION</p> <table border="1"> <tr> <td>PLUNK FEE RECEIVED</td> <td>FEE: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT NO. _____ for the following:</td> <td> <input type="checkbox"/> All Fees <input type="checkbox"/> 1.10 Fee (Filing) <input type="checkbox"/> 1.17 Fee (Processing Excl. of time) <input type="checkbox"/> 1.14 Fee (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit </td> </tr> <tr> <td>\$2,520</td> <td></td> <td></td> </tr> </table>										Foreign Priority claimed 35 USC 113 (a-d) conditions met	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS	Verified and Acknowledged	Foreign Office	OTHER	0	64	3	PLUNK FEE RECEIVED	FEE: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT NO. _____ for the following:	<input type="checkbox"/> All Fees <input type="checkbox"/> 1.10 Fee (Filing) <input type="checkbox"/> 1.17 Fee (Processing Excl. of time) <input type="checkbox"/> 1.14 Fee (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit	\$2,520		
Foreign Priority claimed 35 USC 113 (a-d) conditions met	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS																						
Verified and Acknowledged	Foreign Office	OTHER	0	64	3																						
PLUNK FEE RECEIVED	FEE: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT NO. _____ for the following:	<input type="checkbox"/> All Fees <input type="checkbox"/> 1.10 Fee (Filing) <input type="checkbox"/> 1.17 Fee (Processing Excl. of time) <input type="checkbox"/> 1.14 Fee (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit																									
\$2,520																											



005601

Same Day Re-Transmittal
Of Identical Documents
Now With Accompanying Check

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No. : 5,697,536 Prior Examiner:
Date of Issue : December 16, 1997 Manuel Mendez
Name of Patentee : Eggers et al.
Title of Invention : SYSTEM AND METHOD FOR ELECTROSURGICAL
CUTTING AND ABLATION

REEXAMINATION REQUEST

Commissioner of Patents
and Trademarks
Box REEXAM
Washington, D.C. 20231

CERTIFICATE UNDER 37 CFR 1.8: The Undersigned hereby certifies that this paper or papers, as described herein below, are being deposited with the United States Postal Service, on the date shown below with sufficient postage as first class mail in an envelope addressed to the:

Commissioner of Patents and Trademarks
Box REEXAM
Washington, D.C. 20231

On this 23rd day of December, 1999.

By:

William C. Fuess
William C. Fuess
Reg. No. 30,054

01/04/2000 KIVITTY 00000025 90005641

01 FC:147 Dear Sir: 220.00

The attached was inadvertently dispatched this day without the accompanying check, now attached.

It is respectfully requested that the check should be associated with one set of documents, only, and that one only REQUEST FOR REEXAMINATION should be opened.

Respectfully submitted,

Dated:

12/23/99
December 23, 1999

William C. Fuess
William C. Fuess
Reg. No. 30,054

1A

~~IN THE~~ UNITED STATES PATENT AND TRADEMARK OFFICE

Title of Invention : SYSTEM AND METHOD FOR ELECTROSURGICAL CUTTING AND ABLATION

envelope bearing first class postage in an official U.S. Postal Service repository at the date set forth below addressed as follows:

Name Hira V. Thapliyal
Arthrocare Corporation

Address 595 North Pastoria Avenue
Sunnyvale, California 94086

5. A check in the amount of \$2,520.00 is attached. (37 CFR §§1.20(c) and 1.510(a)).

Please charge any deficiency to Deposit Account
No. _____

Any refund should be made by check.

The name and address of the person making this request is:

Name William C. Fuess
Reg. No. 30,054

Address FUESS & DAVIDENAS
10951 Sorrento Valley Road
Suite II-G
San Diego, CA 92121-1613

Tel. No.: (858) 452-⁶293
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Please address all future correspondence as follows:

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San Diego, CA 92121-1613

Respectfully submitted,

Dated:

12/23/99
December 23, 1999

William C. Fuess
Reg. No. 30,054

3A

STATEMENT OF NEW QUESTION OF PATENTABILITY

I. Patent and Claims for which Reexamination is Requested

Reexamination under 35 U.S.C. §§302-307 and 37 CFR §1.510 is requested of U.S. Patent No. 5,697,536 which issued on December 16, 1997 to Eggers et al., and is assigned to Arthrocare Corporation (hereinafter "the Eggers '536 Patent"). Reexamination is requested of claims 1-3, 14, 16, 22, 27, 30, 33, 38, 41-48, 55, 57, 60 & 63, in view of U.S. Patent No. 4,116,198 to Roos (hereinafter "the Roos '198 Patent"). It is noted that the Roos '198 Patent was not before the Examiner during the prosecution of the Eggers '536 Patent.

II. Statement of Substantial New Question of Patentability

A. Overview

The Eggers '536 Patent is directed to devices employing high frequency voltage to cut and ablate tissue. (Eggers '536 1:19-21).

The Eggers '536 Patent discloses and claims electrosurgical devices that are designed and intended to be used in conductive fluids such as isotonic saline. The electrosurgical device generally includes a current supplying radio frequency generator; an active electrode, or an electrode terminal, mounted near the tip of a surgical probe; a return electrode positioned rearward of and in a spaced apart condition from said active electrode; an insulator separating the active and return electrodes; and, an

electrically conducting fluid path in electrical contact with the active and return electrodes.

B. Subject Matter of Claims 1-3, 14, 16, 22, 27, 30, 33, 38, 41-48, 55, 57, 60 & 63

The independent claims are claims 1, 45 and 63.

Each of the independent claims is directed to an "electrosurgical system." The statement of intended purpose in the preamble of claim 1 is one of "use," namely "for use with a high frequency power supply and an electrically conducting fluid supply" (Id., 15:6-7); whereas the statement of intended purpose in both claims 45 and 63 include the following functional language: "for applying electrical energy to a target site on a structure within or on a patient's body" (Id., 18:13-15, 20:8-10)¹. With respect to the preambles, it is further noted that

¹Reexam requestor respectfully asserts that the preamble language of claims 1, 45 and 63 is not limiting. The Court of Customs and Patent Appeals, predecessor to the Court of Appeals for the Federal Circuit, in Kropa v. Robie, 187 F.2d 150, 88 USPQ 478 (CCPA 1951) reviewed 37 of its own prior decisions, 27 of which held that the preamble was not a limitation. The CCPA distilled the following synthesis from the cases:

[T]he preamble has been denied the effect of a limitation where the claim or count was drawn to a structure and the portion of the claim following the preamble was a self-contained description of the structure not depending for completeness upon the introductory clause; or where the claim or count was drawn to a product and the introductory clause merely recited a property inherent in the old composition defined by the remaining part of the claim. In those cases, the claim or count apart from the introductory clause completely defined the subject matter, and the preamble merely stated a purpose or intended use of that subject matter.

(Id. at 152).

The CAFC provide a noteworthy analysis in C.R. Bard Inc. v. M3 Systems Inc., 48 USPQ 1225, 1230 (Fed.Cir. 1998), one directly applicable to claim 1 of the Eggers '536 Patent, wherein the preamble of claim 21 of the Bard '056

electrode is adapted for said purpose. The fluid delivery element defines a fluid path which is in electrical contact with the return electrode and the electrode terminal. The fluid path has an inlet adapted to be fluidly coupled to the fluid supply for directing fluid along the fluid path to generate a current flow path between the return electrode and electrode terminal (i.e., conductively link the passive and active electrodes using a conductive fluid).

THE RECI-
TATION
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CLAIMS
IN THE
SPECIFICATION
OF THE
PATENT
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IS
AS FOLLOWS:
The recited elements of the claim 45 "system" for applying electrical energy include a high frequency power supply, an electrosurgical probe, a return electrode, and an electrically conducting fluid supply for directing fluid so as to generate a current flow path between the return electrode and the electrode terminal. In contradistinction to claim 1, claim 45 positively recites the power and fluid supplies in the body of the claim as opposed to in the preamble as noted hereinabove. Both the probe and the return electrode are as recited in claim 1, with the functional terms "for" and "adapted to" eliminated, as the power supply is positively recited in claim 45.

The first eleven (11) lines of claim 63 read verbatim as claim 45. Thereafter, claim 63, as claim 45, requires an electrically conducting fluid supply, however claim 63 further requires a fluid delivery element. The fluid delivery element defines a fluid path electrically coupled to the electrode terminal for directing electrically conductive fluid to a target

site and the electrode terminal.

Claims 2, 3, 14, 16, 22, 27, 30, 33, 38, and 41-44 of the Eggers '536 Patent. directly or indirectly depend from claim 1. Each will be taken up seriatim.

Claim 2 of the Eggers '536 Patent depends from claim 1, and requires that the passive or return electrode form a portion of the shaft of the probe.

Claim 3 of the Eggers '536 Patent depends from claim 2, and requires that the "electrosurgical system" further include an insulating member circumscribing the passive electrode, the passive electrode being spaced from the electrode terminal so to minimize direct contact between the passive electrode and a body structure when the electrode terminal is positioned for electrosurgery.

Claim 14 of the Eggers '536 Patent depends from claim 1, and requires that the electrode terminal comprise a single active electrode disposed near the distal end of the probe shaft.

Claim 16 of the Eggers '536 Patent depends from claim 1, and requires that the "electrosurgical system" further include a current limiting element for controlling current flow through the electrode terminal to inhibit power dissipation into the medium surrounding the target site.

Claim 22 of the Eggers '536 Patent depends from claim 16, and requires that the current limiting element be a passive current limiting element selected from the group consisting

essentially of inductors, capacitors, resistors and combinations thereof.

Claim 27 of the Eggers '536 Patent depends from claim 1, and requires that the "electrosurgical system" further include means for controlling power to the electrode terminal based on the electrical impedance between the electrode terminal and the return electrode.

Claim 30 of the Eggers '536 Patent depends from claim 1, and requires that the electrode terminal and the return electrode be configured to affect the electrical break down of tissue in the immediate vicinity of the electrode terminal when high frequency voltage is applied between the electrode terminal and the return electrode in the presence of electrically conducting fluid.

Claim 33 of the Eggers '536 Patent depends from claim 1, and requires that the electrode terminal have a distal portion configured for generating high electric field intensities sufficient to cause molecular disintegration of a body structure at the target site.

Claim 38 of the Eggers '536 Patent depends from claim 1, and requires that the electrode terminal be configured for the cutting of tissue.

Claim 41 of the Eggers '536 Patent depends from claim 1, and requires that the electrode terminal and the return electrode be configured to affect the ablation of tissue adjacent the electrode terminal, upon the application of sufficient voltage

therebetween, such that a portion of such tissue is volumetrically removed.

Claim 42 of the Eggers '536 Patent depends from claim 1, and requires that the electrode terminal be disposed at the distal tip of the electrosurgical probe.

Claims 46-48, 55, 57, & 60 of the Eggers '536 Patent, directly or indirectly depend from claim 45. Each will be taken up *seriatim*.

Claim 43 of the Eggers '536 Patent depends from claim 42, and requires that the return electrode be disposed proximally of the electrode terminal on the electrosurgical probe.

Claim 44 of the Eggers '536 Patent depends from claim 1, and requires that the electrode terminal be flexible, be disposed at the distal tip of the probe, and be extendable relative thereto.

Claims 46 and 47 of the Eggers '536 Patent each depend from claim 45 and recite limitations identical to or similar to those of claims 2 & 3 respectively.

Claim 48 of the Eggers '536 Patent depends from claim 45, and requires that the return electrode be an inner tubular member defining an axial lumen within the return electrode, the axial lumen having an inlet in communication with the electrically conducting fluid supply and an outlet in fluid communication with the electrode terminal.

Claims 55, 57 and 60 of the Eggers '536 Patent each depend

from claim 45 and recite limitations identical to or similar to those of claims 42, 16 & 27 respectively.

C. Basis for Substantial New Question of Patentability

It is submitted that claims 1-3, 14, 16, 22, 27, 30, 33, 38, 41-48, 55, 57, 60 & 63 of the Eggers '536 Patent are anticipated by the Roos '198 Patent under 35 U.S.C. §102(b), and should be rejected.

The Roos '198 Patent discloses a bipolar radio frequency electrosurgical probe for removing tissue. The device includes active and return electrodes at the distal end of a probe shaft (endoscope) coupled to a radio frequency generator by connectors at the proximal end. Inductors, capacitors and resistors are further disclosed by Roos for controlling the current flow through the active electrode, so as to inhibit power dissipation into the area surrounding the target site, and a variable tap is provided for controlling the power to the active electrode.

The active electrode projects from the distal end of the probe shaft to engage a target site, with the return electrode being adjacent thereto. The return electrode is spaced back from the active electrode and positioned on, within or integral to the probe shaft, such that the return electrode cannot contact tissue when the device is removing or otherwise treating tissue.

The Roos bipolar device is intended to be used in electrically conductive fluid, with the electrical current flowing between the active and return electrodes through the

fluid. A fluid delivery element defines a fluid path for fluid flow from a fluid supply when the Roos device is used as a "system," as is contemplated. The electrically conductive fluid provides a low impedance path between the active and return electrodes.

An electrically insulating member substantially surrounds the proximal portion of the active electrode, insulating the proximal portion of the electrode from the electrically conductive fluid while housing and supporting the active electrode. The small loop construction of the active electrode, which is inherently flexible and is disclosed as being extendable relative to the distal tip of the probe, provides a high current density which is known to effect sought after tissue removal.

D. Application of Prior Art References to Claims

In accordance with the requirements set forth in 35 U.S.C. §302, the cited prior art is applied to claims 1-3, 14, 16, 22, 27, 30, 33, 38, 41-48, 55, 57, 60 & 63 of the Eggers '536 Patent on an element by element basis as follows:

Claim/ Element		
Claim 1/ Element		

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Claim/ Element		
A	1. An electrosurgical system for use with a high frequency power supply and an electrically conducting fluid supply, the system comprising:	Roos '198 shows a combination of elements, i.e., a system, (e.g., FIG. 4) for use with a high frequency power supply and an electrically conducting fluid supply as evidenced by the electrically conducting fluid (i.e., wash water) passage shown and disclosed by Roos (e.g., FIG. 1, reference numeral 29 and 4:51-54).
B	an electrosurgical probe comprising a shaft having a proximal end and a distal end, an electrode terminal disposed near the distal end, and a connector near the proximal end of the shaft for electrically coupling the electrode terminal to the electrosurgical power supply;	Roos '198 generally shows an electrosurgical probe (FIG. 1) comprising a shaft 13 having proximal and distal ends. An electrode terminal 12 is disposed near the distal end of shaft 13, with connectors, as schematically shown in FIGS. 4-6 & 9, near the proximal end of the shaft 13 for electrically coupling the electrode terminal 12 to the electrosurgical power supply 15.
C	a return electrode adapted to be electrically coupled to the electrosurgical power supply; and	Roos '198 shows a return electrode 11 adapted to be electrically coupled to the electrosurgical power supply 15, specifically via rigid metallic shield 14 (FIG. 1).
D	a fluid delivery element defining a fluid path in electrical contact with the return electrode and the electrode terminal, the fluid path having an inlet adapted to be fluidly coupled to the electrically conducting fluid supply for directing fluid along the fluid path to generate a current flow path between the return electrode and the electrode terminal.	Roos '198 shows a fluid delivery element (FIG. 1), namely the annular space bounded by the interior of shaft wall 13 and the exterior of the fiber optical system 17 (4:51-57), which defines fluid path 29 (FIG. 1) for fluid flow from a fluid supply, not shown but inherently present. The fluid path 29 is in electrical contact with return electrode 11 and the electrode terminal 12. The fluid path 29 inherently has an inlet adapted to be fluidly coupled to a supply of fluid for directing fluid along the fluid path 29, which by its nature will generate a current flow path between the return electrode 11 and the electrode terminal 12.

Claim/ Element		
Claim 2/ Element		
A	2. An electrosurgical system as in claim 1, wherein the return forms a portion of the shaft of the electrosurgical probe.	Roos '198 shows in FIGS. 7 & 8, a return electrode 11 that forms a portion of the shaft 13 of the electrosurgical probe.
Claim 3/ Element		
A	3. An electrosurgical system as in claim 2, further including an insulating member circumscribing the return electrode,	Roos '198 shows in FIGS. 7 & 8 insulating members 35 & 36 circumscribing return electrode 11. Note, 7:17-20.
B	the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and a body structure at the target site when the electrode terminal is positioned in close proximity or in partial contact with the body structure.	Roos '198 shows in FIGS. 7 & 8, a return electrode 11 sufficiently spaced from electrode terminal 12 to minimize direct contact between return electrode 11 and a body structure at the target site when electrode terminal 12 is positioned in close proximity or in partial contact with the body structure.
Claim 14/ Element		
A	14. The electrosurgical system of claim 1 wherein the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	Roos '198 shows in FIGS. 1, 2, 3 & 7, a single active electrode 12 disposed near the distal end of shaft 13.
Claim 16/ Element		
A	16. The electrosurgical system of claim 1 further comprising a current limiting element for controlling current flow through the electrode terminal to inhibit power dissipation into the medium surrounding the target site.	Roos '198 shows in FIG. 4, multiple current limiting elements (i.e., inductor 25, capacitors 26, 28 etc., and resistor "R") for controlling current flow through electrode terminal 12 to inhibit power dissipation into the medium surrounding the target site. Note, 5:26-29, 31-34, and 38-45.

CLAIM 22/ ELEMENT
 CLAIM 27/ ELEMENT
 CLAIM 30/ ELEMENT
 CLAIM 33/ ELEMENT
 CLAIM 38/ ELEMENT

Claim/ Element		
Claim 22/ Element	22. The electrosurgical system of claim 16 wherein the current limiting element is a passive current limiting element selected from the group consisting essentially of inductors, capacitors, resistors and combinations thereof.	Roos '198 shows in FIG. 4, inductor 25, capacitors 26, 28 etc., and resistor "R". Note, 5:38-45.
Claim 27/ Element		
A	27. The electrosurgical system of claim 1 further comprising means for controlling power to the electrode terminal based on the electrical impedance between the electrode terminal and the return electrode.	Roos '198 shows in FIG. 4, inductor 25, whose input voltage is regulatable by variable tap 30, for controlling the power to electrode terminal 12 based upon impedance between it and return electrode 11. Note, 5:30-34.
Claim 30/ Element		
A	30. The electrosurgical system of claim 1 wherein the electrode terminal and the return electrode are configured to affect the electrical break down of tissue in the immediate vicinity of the electrode terminal when high frequency voltage is applied between the electrode terminal and the return electrode in the presence of electrically conducting fluid.	Roos '198 shows in FIG. 1, and generally discloses, electrode terminal 12 and return electrode 11 configured for use in an electrically conductive fluid that affect the electrical break down of tissue in the immediate vicinity of electrode terminal 12 when high frequency voltage is applied between electrode terminal 12 and return electrode 11 in the presence of electrically conducting fluid, illustrated by flow path 29.
Claim 33/ Element	33. The electrosurgical system of claim 1 wherein the electrode terminal has a distal portion configured for generating high electric field intensities sufficient to cause molecular disintegration of a body structure at the target site.	Roos '198 shows and discloses electrode terminal 12 which has a distal portion configured for generating high electric field intensities sufficient to cause molecular disintegration of a body structure at the target site. Note, 2: 37-42.
Claim 38/ Element		

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Claim/ Element		
B	the flexible electrode terminal being extendable relative the distal tip of the probe.	Roos '198 shows for instance in FIG. 1, and discloses, flexible electrode terminal 12 as being extendable relative the distal tip of the probe, Note e.g., 6:12-16.
Claim 45/ Element		
A	45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	Roos '198 shows and discloses a combination of structures and elements, i.e., a system, (e.g., FIG. 4) for applying electrical energy in the form of high frequency generator 15 for use in electrosurgical operations (e.g., electro resection, as in the case of bladder tumors and prostate glands, etc., 1:18-2).
B	a high frequency power supply;	Roos '198 shows the use of high frequency generator 15 and discloses use of same (e.g., 5:9).
C	an electrosurgical probe comprising a shaft having a proximal end and a distal end, an electrode terminal disposed near the distal end and a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Roos '198 generally shows an electrosurgical probe (FIG. 1) comprising shaft 13 having proximal and distal ends. Electrode terminal 12 is disposed near the distal end of shaft 13, with connectors schematically shown (FIGS. 4-6 & 9) near the proximal end of shaft 13 for electrically coupling electrode terminal 12 to electrosurgical power supply 15.
D	a return electrode electrically coupled to the electrosurgical power supply;	Roos '198 shows return electrode 11 electrically coupled to electrosurgical power supply 15 (e.g., FIGS. 4-6), and discloses same at 5:3-10.

Claim/ Element		
E	<p>an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.</p>	<p>Roos '198 shows a fluid delivery element (FIG. 1), namely the annular space bounded by the interior of shaft wall 13 and the exterior of fiber optical system 17 (4:51-57), which defines fluid path 29 (FIG. 1) for fluid flow from a fluid supply. The fluid path 29 is in electrical contact with return electrode 11 and the electrode terminal 12; which by its nature will generate a current flow path between return electrode 11 and electrode terminal 12.</p>

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Claim/ Element		
Claim 57/ Element		
A	57. The electrosurgical system of claim 45 further comprising a current limiting element for controlling current flow through the electrode terminal to inhibit power dissipation into the medium surrounding the target site.	Roos '198 shows in FIG. 4, multiple current limiting elements (i.e., inductor 25, capacitors 26, 28 etc., and resistor "R") for controlling current flow through electrode terminal 12 to inhibit power dissipation into the medium surrounding the target site. Note, 5:26-29, 31-34, and 38-45.
Claim 60/ Element		
A	60. The electrosurgical system of claim 45 further comprising means for controlling power to the electrode terminal based on the electric impedance between the electrode terminal and the return electrode.	Roos '198 shows in FIG. 4, inductor 25, whose input voltage is regulatable by variable tap 30, for controlling the power to electrode terminal 12 based upon impedance between it and return electrode 11. Note, 5:30-34.
Claim 63/ Element		
A	63. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	Roos '198 shows an electrosurgical system (FIG. 4) for applying electrical energy via high frequency generator 15 to a target site on a structure within or on a patient's body (i.e., a bladder or prostate as disclosed, for instance at 1:20).
B	a high frequency power supply;	Roos '198 shows the use of high frequency generator 15 and discloses use of same throughout (e.g., 5:9).
C	an electrosurgical probe comprising a shaft having a proximal end and a distal end, an electrode terminal disposed near the distal end, and a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Roos '198 generally shows an electrosurgical probe (FIG. 1) comprising shaft 13 having proximal and distal ends. Electrode terminal 12 is disposed near the distal end of shaft 13, with connectors schematically shown (FIGS. 4-6 & 9) near the proximal end of the shaft for electrically coupling electrode terminal 12 to the electrosurgical power supply 15.

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Claim/ Element		
D	a return electrode electrically coupled to the electrosurgical power supply;	Roos '198 shows return electrode 11 electrically coupled to electrosurgical power supply 15 (e.g., FIGS. 4-6), and discloses same at 5:3-10.
E	an electrically conducting fluid supply;	Roos '198 shows a fluid delivery element (FIG. 1), namely the annular space bounded by the interior of shaft wall 13 and the exterior of fiber optical system 17 (4:51-57), which defines fluid path 29 (FIG. 1) for fluid flow from a fluid supply.
F	a fluid delivery element defining a fluid path electrically coupled to the electrode terminal for directing electrically conducting fluid to the target site and the electrode terminal to substantially surround the electrode terminal with electrically conducting fluid and to locate electrically conducting fluid between the electrode terminal and the target site.	Roos '198 shows a fluid delivery element (FIG. 1), namely the annular space bounded by the interior of shaft wall 13 and the exterior of fiber optical system 17 (4:51-57), which defines fluid path 29 (FIG. 1) for fluid flow from a fluid supply. Fluid path 29 is in electrical contact with return electrode 11 and electrode terminal 12, which by its nature will generate a current flow path between return electrode 11 and electrode terminal 16 (see also, claim 1, 7:59 et seq.: "a space being formed between said treatment electrode and said neutral electrode which is adapted to be filled with liquid to provide electrical conductress between said electrodes.").

III. Conclusion

As shown above, this Request raises a substantial new question of patentability of claims 1-3, 14, 16, 22, 27, 30, 33, 38, 41-48, 55, 57, 60 & 63 of the Eggers '536 Patent.

A certificate of Service attesting that a copy of this Request was served on the attorney of record of the patentee is submitted herewith. Also submitted herewith is a check in the amount of \$2,520.00 in compliance with 37 CFR 1.20(c).

Respectfully submitted,

Dated:

12/23/99

William C. Fuess

December 23, 1999

William C. Fuess

FUESS & DAVIDENAS

10951 Sorrento Valley Road

Suite II-G

San Diego, CA 92121-1613

600022 10350006
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UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

CONTROL NUMBER	FILING DATE	PATENT UNDER REEXAMINATION	ATTORNEY DOCKET NO.
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90/005,601 12/30/99 5697536

GM31/0202

JAMES M HESLIN
TOWNSEND AND TOWNSEND AND CREW
20TH FLOOR STEUART STREET TWR
ONE MARKET PLAZA
SAN FRANCISCO CA 94105-1492

EXAMINER

MENDEZ, M

ART UNIT

PAPER NUMBER

3763

DATE MAILED:

Remail 02/02/98
10-27-8

ORDER GRANTING/DENYING REQUEST FOR REEXAMINATION

The request for reexamination has been considered. Identification of the claims, the references relied on, and the rationale supporting the determination are attached.

Attachment(s): ☐ PTO-892, ☒ PTO-1449, ☐ Other: _____

1. ☒ The request for reexamination is GRANTED.

RESPONSE TIMES ARE SET TO EXPIRE AS FOLLOWS:

For Patent Owner's Statement (optional): TWO MONTHS from the mailing date hereof. 37 CFR 1.530(b).
EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c).

For Requester's reply (optional): TWO MONTHS from the date of service of any patent owner's statement. 37 CFR 1.535. NO EXTENSION OF TIME IS PERMITTED. If patent owner does not file a timely statement under 37 C.F.R. 1.530(b), no reply by requester is permitted.

2. ☐ The request for reexamination is DENIED.

This decision is not appealable. 35 U.S.C. 303(c). Requester may seek review by petition to the Commissioner within ONE MONTH from the mailing date hereof. 37 CFR 1.515(c). EXTENSIONS OF TIME ONLY UNDER 37 CFR 1.183.

In due course, a refund under 37 CFR 1.26(c) will be made to requester (listed below if not patent owner)
☐ by Treasury check, ☐ by credit to Deposit Account No. _____
unless notified otherwise. 35 U.S.C. 303(c).

(Third party requester's correspondence address)

Reexam Control No.: 90/005,601
Art Unit 3763

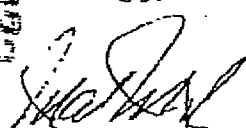
A substantial new question of patentability affecting at least claims 1-3, 14, 16, 22, 27, 30, 33, 38, 41-48, 55, 57, 60 and 63 of U.S. Patent No. 5,697,536 to Eggers et al. is raised by the request.


The request indicates that the requester considers at least claims 1-3, 14, 16, 22, 27, 30, 33, 38, 41-48, 55, 57, 60 and 63 of Eggers et al. as being anticipated by U.S. Patent No. 4,116,198 to Roos under 35 U.S.C. 102.

It is agreed that a reasonable examiner would consider U.S. Patent No. 4,116,198 to Roos to be important prior art which would clearly be material in the examination of the claims as pointed out in detail in the request.

The reference is therefore considered to raise a substantial question of patentability.

Accordingly, reexamination of all the patent claims is deemed proper.


Manuel Antonio Mendez
January 25, 2000


WAYNE WOOD COUSINS
SUPERVISORY PATENT EXAMINER



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

CONTROL NUMBER FILING DATE PATENT UNDER REEXAMINATION ATTORNEY CHECK NO.

EXAMINER

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PAPER NUMBER

DATE MAILED

ORDER GRANTING/DENYING REQUEST FOR REEXAMINATION

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In due course, a refund under 37 CFR 1.26(c) will be made to requester (listed below if not patent owner)
☐ by Treasury check, ☐ by credit to Deposit Account No. _____
unless notified otherwise. 35 U.S.C. 303(c).

(Third party requester's correspondence address)

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Art Unit 3763

JUN 21 2000

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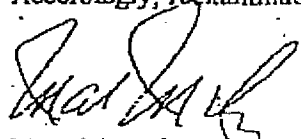
A substantial new question of patentability affecting at least claims 1-3, 14, 16, 22, 27, 30, 33, 38, 41-48, 55, 57, 60 and 63 of U.S. Patent No. 5,697,536 to Eggers et al. is raised by the request.

The request indicates that the requester considers at least claims 1-3, 14, 16, 22, 27, 30, 33, 38, 41-48, 55, 57, 60 and 63 of Eggers et al. as being anticipated by U.S. Patent No. 4,116,198 to Roos under 35 U.S.C. 102.

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Manuel Antonio Mendez
January 25, 2000

WILLIAM H. LUGGINS
SUPERVISORY PATENT EXAMINER

90/005641

Page 1 of 1

FORM PTO-1419	Attorney Docket No.: E	Patent No.: 5,697,536
LIST OF PATENT PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	Inventor(s): Eggers et al.	
	Issue Date 12/16/97	Group Art: Unknown

U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
AA	4,116,198	09/26/78	Roos	128	303.15	05/14/76
AB						
AC						
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

FOREIGN PATENT DOCUMENTS

Document No.	Date	Country	Class	Sub Class	Translation Yes No
AL					
AH					
AN					

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AO	
AP	
AQ	

EXAMINER:

DATE CONSIDERED:

January 20, 98

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

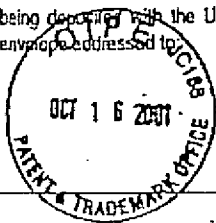
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Assistant Commissioner for Patents,
Washington, D.C. 20231

On:

By:

Katie Zarzana



PATENT

Attorney Docket No.: 16238-000610

10

3237
REF
TC 373
CP2
2401

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of:

PHILIP E. EGGERS et al.

Application No. 90/005,601

Reexamination of Patent No.: 5,697,536

Issued: December 16, 1997

For: SYSTEM AND METHOD FOR
ELECTROSURGICAL CUTTING AND
ABLATION

Assistant Commissioner for Patents
Washington, D.C. 20231

Examiner: M Mendez

Art Unit: 3739

INFORMATION DISCLOSURE
STATEMENT UNDER
37 CFR §1.97 and §1.98

Sir:

The references cited on attached form PTO-1449 are being called to the attention of the Examiner. A copy of each is enclosed.

The Owner, ArthroCare Corporation, also brings the following information and list of materials to the attention of the Examiner. On February 13, 1998, ArthroCare Corporation filed a lawsuit in the United States District Court for the Northern District of California against defendants Ethicon, Inc., Mitek Surgical Products, Inc., and Gynecare, Inc., alleging infringement of U.S. Patent Nos. 5,697,909, 5,697,536, 5,697,281, and 5,697,882 (the "patents-in-suit"). The case was assigned Case No. C98-00609 WHO (the "Ethicon litigation"). The *Ethicon* litigation terminated in June 1999, with the defendants taking a license from ArthroCare under the patents-in-suit. The defendants have paid ArthroCare a license fee, and will pay ongoing royalties on sales in the United States of certain arthroscopy and gynecology products covered by these patents.

After the *Ethicon* litigation terminated, Owner was apprised by a third party of section 2001.06(c) of the Manual of Patent Examining Procedure ("MPEP") with respect to the prosecution of applications for patents other than those at issue in the *Ethicon* litigation and that were pending before the

Ethicon litigation was commenced, namely, U.S. Application Nos. 08/807,111 (now U.S. Patent No. 5,891,095), 08/766,382 (now U.S. Patent No. 5,888,198), and 08/760,768 (now U.S. Patent No. 5,766,453).

Although not required to do so, Owner did bring the *Ethicon* litigation to the attention of Examiner Mendez during the prosecution of at least U.S. Application Nos. 08/807,111 (now U.S. Patent No. 5,891,095), 08/766,382 (now U.S. Patent No. 5,888,198), and 08/795,686 (now U.S. Patent No. 5,871,469), during a telephone conference relating to those applications. Owner also submitted the prior art that was principally relied on by the defendants in the *Ethicon* litigation to Examiner Mendez during the prosecution of U.S. Application Nos. 08/807,111 (now U.S. Patent No. 5,891,095), 08/766,382 (now U.S. Patent No. 5,888,198), and 08/795,686 (now U.S. Patent No. 5,871,469). Indeed, Owner withdrew one of those pending applications, namely, U.S. Application No. 08/807,111 (now U.S. Patent No. 5,891,095), from allowance to provide Examiner Mendez with the opportunity to consider those references.

Accompanying this statement is a form listing references for the Examiner's consideration in connection with the present reexamination, including references principally relied on by the defendants in the *Ethicon* litigation.

In addition, Owner provides the following list of materials from the *Ethicon* litigation that reflect the defendants' and ArthroCare's primary arguments relating to issues of validity and enforceability:

1. ArthroCare's Complaint For Patent Infringement Of U.S. Letters Patent Nos. 5,697,909; 5,697,281; 5,697,882; and 5,697,536 filed February 13, 1998;
2. Plaintiff ArthroCare's Motion For Preliminary Injunction Against Defendant Ethicon and Mitek, filed March 10, 1998.
3. Answer and Counterclaim Of Defendants Ethicon, Inc., Mitek Surgical Products, Inc., and Gynecare, Inc., filed April 6, 1998;
4. Plaintiff ArthroCare's Motion To Strike Affirmative Defenses And To Strike Defendants' Counterclaim In Part Or, In The Alternative, For a More Definite Statement, filed April 17, 1998;
5. Defendants' Opposition To ArthroCare's Motion To Strike Affirmative Defenses And To Strike Defendants' Counterclaim In Part Or, In The Alternative For A More Definite Statement And Points

- And Authorities In Support Of Conditional Motion To File An Amended Answer and Counterclaim, filed May 7, 1998;
6. ArthroCare's Reply In Support of Motion To Strike Affirmative Defenses And To Strike Defendants' Counterclaim In Part Or, In The Alternative, For A More Definite Statement, filed May 14, 1998;
 7. Memorandum Decision And Order Regarding ArthroCare's Motion To Strike And Defendants' Motion For Leave To File An Amended Answer And Counterclaim, issued June 5, 1998;
 8. Amended Answer And Counterclaim of Defendants Ethicon, Inc., Mitek Surgical Products, Inc., and Gynecare, Inc., filed June 22, 1998;
 9. ArthroCare's Reply to Defendants' Amended Counterclaim, filed July 6, 1998;
 10. ArthroCare's Initial Disclosure Of Asserted Claims Pursuant To Local Rule 16-7, served March 30, 1998;
 11. Defendants' Initial Disclosure of Prior Art Pursuant To Local Rule 16-7, served May 26, 1998;
 12. Plaintiff ArthroCare's Corporation's Opening Claim Construction Brief, filed May 11, 1998;
 13. Ethicon, Inc.'s Claim Construction Brief, filed May 22, 1998;
 14. Joint Claim Construction Statement Pursuant To Civil Local Rule 16-11(b)(1) For Claim Construction Hearing, filed May 29, 1998;
 15. Plaintiff ArthroCare's Corporation's Reply To Defendants' Claim Construction Brief, filed May 29, 1998;
 16. Memorandum Decision And Order Regarding Claim Construction, issued July 6, 1998;
 17. Defendants' Petition For Permission To Appeal Pursuant To 28 U.S.C. §1292(b) filed with the U.S. Court of Appeals for the Federal Circuit on July 16, 1998;
 18. Plaintiff's Answer To Defendants' petition For Permission To Appeal Pursuant To 28 U.S.C. §1292(b), filed July 23, 1998;
 19. Federal Circuit's Order On Petition For Permission To Appeal, issued August 20, 1998;
 20. Summary Of Defendant Ethicon's Opposition To Plaintiff ArthroCare's Motion For Preliminary Injunction, filed July 23, 1998;
 21. Ethicon's Opposition To Plaintiff ArthroCare's Motion For Preliminary Injunction, filed July 23, 1998;

22. Declaration Of John R. LaCourse In Opposition To ArthroCare's Motion For Preliminary Injunction, filed July 23, 1998;
23. Declaration Of Robert D. Tucker Filed In Support Of Ethicon's Opposition To ArthroCare's Motion For Preliminary Injunction, filed July 23, 1998;
24. Declaration Of Robert A. Armitage, Esq., Filed In Support Of Ethicon's Opposition To ArthroCare's Motion For Preliminary Injunction, filed July 23, 1998;
25. Supplemental Declaration Of Robert A. Armitage, Esq., In Support of Ethicon's Opposition To Plaintiff ArthroCare's Motion For Preliminary Injunction, filed August 4, 1998;
26. ArthroCare's Reply Memorandum In Support Of Motion For Preliminary Injunction, filed August 6, 1998;
27. Declaration Of James Doss In Support Of ArthroCare's Motion For Preliminary Injunction, filed August 6, 1998;
28. Reply Declaration Of Philip E. Eggers In Support Of ArthroCare's Motion For Preliminary Injunction, filed August 6, 1998;
29. Reply Declaration Of John T. Raffle In Support Of ArthroCare's Motion For Preliminary Injunction, filed August 6, 1998;
30. Ethicon's Supplemental Opposition To Plaintiff ArthroCare's Motion For Preliminary Injunction, filed September 3, 1998.
31. Supplemental Declaration Of Robert D. Tucker, Ph.D. M.D., Filed In Support Of Ethicon's Opposition To ArthroCare's Motion For Preliminary Injunction, filed September 3, 1998;
32. Supplemental Declaration Of John R. LaCourse, Ph.D., Filed In Support Of Ethicon's Opposition To ArthroCare's Motion For Preliminary Injunction, filed September 3, 1998;
33. Direct Examination Of Robert D. Tucker, Ph.D., M.D., Filed In Support Of Ethicon's Opposition To ArthroCare's Motion For Preliminary Injunction; filed September 3, 1998;
34. Direct Examination of Robert A. Armitage, Esq., Filed In Support Of Ethicon's Opposition To ArthroCare's Motion For Preliminary Injunction, filed September 3, 1998;
35. Direct Examination of John R. LaCourse, Ph.D., Filed In Support of Ethicon's Opposition To ArthroCare's Motion For Preliminary Injunction, filed September 3, 1998;

36. ArthroCare's Supplemental Memorandum In Response To The Supplemental Declaration Of Robert A. Armitage, filed September 3, 1998;
37. Direct Testimony Of John T. Raffle In Support Of ArthroCare's Motion For Preliminary Injunction, filed September 3, 1998;
38. Direct Testimony Of Philip E. Eggers In Support Of ArthroCare's Motion For Preliminary Injunction, filed September 3, 1998;
39. Joint Statement Regarding Differences Between The Two Translations Of The Elsasser And Roos Article Proffered By Defendants, filed September 22, 1998;
40. Memorandum Decision And Order Regarding Preliminary Injunction Motion, issued December 2, 1998;
41. Ethicon's Response To ArthroCare's First Set of Interrogatories To Defendant Ethicon, served November 6, 1998;
42. Plaintiff ArthroCare's Response To Defendant Gynecare, Inc.'s First Set Of Interrogatories, served November 10, 1998;
43. Plaintiff ArthroCare's Response To Mitek's First Set Of Interrogatories, served November 10, 1998;
44. Plaintiff ArthroCare's Response To Defendant Ethicon, Inc.'s First Set of Interrogatories, served November 10, 1998;
45. Plaintiff ArthroCare's Objections And Responses To Defendants' First Set Of Requests For Admissions, served January 4, 1999;
46. Plaintiff ArthroCare's Objections and Responses To Defendant Gynecare, Inc.'s Second Set Of Interrogatories, served January 4, 1999;
47. Plaintiff ArthroCare's Supplemental Objections and Responses to Defendants' Request For Admission No. 36, served January 5, 1999;
48. Expert Witness Report of John R. LaCourse, served January 8, 1999;
49. Expert Witness Report of Robert D. Tucker, served January 8, 1999;
50. Expert Witness Report of David J. Parins, served January 8, 1999;
51. Expert Witness Report of Robert A. Armitage, Esq., served January 8, 1999;
52. Expert Witness Report of Massoud Motamedi, Ph.D., served January 8, 1999;
53. Expert Witness Report of Ashley J. Welch, Ph.D., served January 8, 1999;

54. Responsive Expert Report of Leslie A. Geddes, Ph.D., served January 29, 1999;
55. Responsive Expert Report of Donald W. Banner served January 29, 1999;
56. Supplemental Expert Report of David J. Parins served February 9, 1999;
57. Ethicon's Motion For Summary Judgment Of Invalidity For Failure To Satisfy The Requirements of 35 U.S.C. §§102-103, filed March 5, 1999;
58. Joint Statement Of Uncontested Facts In Support Of Ethicon's Motion For Partial Summary Judgment Of Invalidity Under 35 U.S.C. §§102 and 103, filed March 5, 1999;
59. Plaintiff ArthroCare's Opposition To Defendants' Motion For Summary Judgment Of Invalidity Under 35 U.S.C. §§102-103, filed March 18, 1999;
60. Ethicon's Reply Memorandum In Support Of Motion For Summary Judgment Of Invalidity Under 35 U.S.C. §§102 and 103, filed March 25, 1999;
61. Ethicon's Motion For Partial Summary Judgment Of Invalidity For Failure To Satisfy The Requirements of 35 U.S.C. §112, filed March 5, 1999;
62. Joint Statement Of Uncontested Facts In Support of Ethicon's Motion For Partial Summary Judgment For Invalidity For Failure To Satisfy The Requirements Of 35 U.S.C. §112, filed March 5, 1999;
63. Plaintiff ArthroCare's Opposition To Defendants' Motion For Partial Summary Judgment Of Invalidity For Failure To Satisfy The Requirements Of 35 U.S.C. §112, filed March 18, 1999;
64. Ethicon's Reply Memorandum In Support Of Motion For Partial Summary Judgment Of Invalidity For Failure To Satisfy The Requirements Of 35 U.S.C. §112, filed March 25, 1999;
65. Declaration of Leslie A. Geddes, Ph.D., In Support of ArthroCare's Oppositions To Defendants Motions For Partial Summary Judgment, filed March 18, 1999;
66. Plaintiff ArthroCare's Motion For Partial Summary Judgment That Claims Are Not Anticipated Or Rendered Obvious By Certain References, filed March 5, 1999;
67. Ethicon's Opposition To ArthroCare's Motion For Partial Summary Judgment That Claims Are Not Anticipated Or Rendered Obvious By Certain References, filed March 18, 1999;
68. ArthroCare's Reply Brief In Support Of ArthroCare's Motion For Partial Summary Judgment That Claims Are Not Anticipated Or Rendered Obvious By Certain References, filed March 25, 1999;
69. Plaintiff ArthroCare's Motion For Partial Summary Judgment Of No Inequitable Conduct Or, Alternatively, For Bifurcation, filed March 5, 1999;

70. Joint Statement Of Undisputed Facts In Support Of ArthroCare's Motion For Partial Summary Judgment Of No Inequitable Conduct Or, Alternatively, For Bifurcation, filed March 5, 1999;
71. Ethicon's Opposition Of Plaintiff ArthroCare's Motion For Partial Summary Judgment Of No Inequitable Conduct Or Alternatively For Bifurcation, filed March 18, 1999;
72. Declaration of Robert A. Armitage, Esq., In Support Of Defendant Ethicon, Inc.'s Opposition To ArthroCare's Motion For Summary Judgment, filed March 18, 1999;
73. Plaintiff ArthroCare's Reply Brief In Support Of Its Motion For Partial Summary Judgment Of No Inequitable Conduct Or, Alternatively, For Bifurcation, filed March 25, 1999;
74. Plaintiff ArthroCare's Motion For Partial Summary Judgment That Defendants Cannot Prevail On Their Enablement And Written Description Defenses As To Certain Claims, filed March 5, 1999;
75. Joint Statement Of Undisputed Facts In Support Of ArthroCare's Motion For Partial Summary Judgment That Defendants Cannot Prevail Under Enablement And Written Description Defenses As To Certain Claims, filed March 5, 1999;
76. Ethicon's Opposition To ArthroCare's Motion For Partial Summary Judgment That Defendants Cannot Prevail On Their Enablement And Written Description Defenses As To Certain Claims, filed March 18, 1999;
77. ArthroCare's Reply Brief In Support Of ArthroCare's Motion For Partial Summary Judgment That Defendants Cannot Prevail On Their Enablement And Written Description Defenses As To Certain Claims, filed March 25, 1999;
78. Defendants' Trial Brief On The Issues Of Unenforceability And Invalidity Under 35 U.S.C. §§102, 103, and 112, filed March 29, 1999;
79. Plaintiff ArthroCare's Trial Brief Re: Validity and Enforceability Of The Patents-In-Suit, filed April 7, 1999;
80. Defendants' Notice Of Prior Art Pursuant To 35 U.S.C. §282, filed April 9, 1999;
81. April 26, 1999 Letter From Defendants To The Court Regarding Additional Claim Construction Issues;
82. Joint Proposed Jury Instructions For Claims 46, 55, 58, 59, 61, and 62 of U.S. Patent No. 5,697,536;

83. April 30, 1999 Letter From ArthroCare To The Court Regarding Additional Claim Construction Issues;
84. Expedited Motion Of Plaintiff ArthroCare Corporation Regarding Joint Jury Instructions, filed May 13, 1999;

In addition to the above-listed materials, there are numerous other papers that were filed with the Court in connection with the *Ethicon* litigation. Furthermore, depositions were taken of numerous witnesses regarding validity and enforceability issues. If the Examiner desires, Owner will submit any or all of the listed material, the other papers filed with the court, and/or transcripts of depositions to the Examiner for consideration. Owner will also provide any additional information that the Examiner desires about the *Ethicon* litigation or the materials described herein.

In addition to the *Ethicon* litigation, on July 25, 2001, Owner commenced an action in the District of Delaware against Smith & Nephew, Inc. ("Smith & Nephew") for infringement of U.S. Patent Nos. 5,697,536 ("the '536 Patent"), 5,697,882 ("the '882 Patent") and 6,224,592 ("the '592 Patent"). That action was assigned Civil Action No. 01-504-SLR. In response, Smith & Nephew filed a mirror image declaratory judgment action in the Northern District of California against Owner on August 31, 2001. The California action was assigned Case No. CV-01-03331 BZ to Magistrate Judge Zimmerman, but was later reassigned Case No. CV-01-03331 MHP to District Court Judge Patel (the Delaware and California cases collectively are referred to herein as the "*Smith & Nephew* litigation"). In these actions, Smith & Nephew asserts that the '536 Patent, the '882 Patent and the '592 Patent are invalid and not infringed. In addition, Smith & Nephew contends that the '592 Patent is unenforceable for inequitable conduct. Specifically, Smith & Nephew argues that during prosecution of the '592 patent, Owner and its attorneys should have but did not explicitly point out to the Examiner a ruling in the Court's denial of a preliminary injunction motion (see the document listed as Item No. 40 above) from the *Ethicon* litigation that the so-called Roos '198 patent (U.S. Patent No. 4,116, 198) disclosed the use of conductive fluid. Smith & Nephew further argues that the Court's finding in denying the preliminary injunction motion was inconsistent with a position taken by Owner during prosecution of the '592 patent, namely, that the Roos '198 patent does not disclose conductive fluid. Smith & Nephew's inequitable conduct allegations are set forth or referred to in Item Nos. 86, 88, 89, 90, 91 and 92 below.

The *Smith & Nephew* litigation is still pending before the District of Delaware. However, *Smith & Nephew* has agreed to dismiss the California litigation. Below is a list of materials from the *Smith & Nephew* litigation which include *Smith & Nephew's* primary arguments relating to validity and enforceability:

85. *ArthroCare's* Complaint For Patent Infringement Of U.S. Patent Nos. 5,697,536, 5,697,882 and 6,224,592 (including exhibits A-C), filed July 25, 2001;
86. Answer and Counterclaims of *Smith & Nephew*, filed September 13, 2001;
87. Plaintiff's *ArthroCare Corporation's* Motion to Enjoin Second-Filed, Duplicative Litigation; Plaintiff's Opening Brief in Support of its Motion to Enjoin Second-Filed, Duplicative Litigation (including exhibits A-F), filed September 10, 2001;
88. Defendant's Answer To Plaintiff's Opening Brief In Support Of Its Motion To Enjoin Second Filed Action (including exhibits A-C), filed September 24, 2001;
89. Motion Of Defendant *Smith & Nephew, Inc.* To Transfer Venue Pursuant To 28 U.S.C. §1404(a) (including exhibits A-B), September 13, 2001;
90. *Smith & Nephew's* Complaint For Declaratory Judgment Of Patent Invalidity, Unenforceability And Non-Infringement (including exhibits A-C), filed August 31, 2001;
91. *Smith & Nephew's* Notice Of Related Case (including exhibits A-E), filed August 31, 2001;
92. *Smith & Nephew's* Notice Of Pendency Of Other Action Pursuant To Civil Local Rule 3-13 (including exhibit A), filed August 31, 2001.
93. *ArthroCare's* Statement In Opposition To *Smith & Nephew's* Notice Of Related Case (including exhibits A-B), filed September 14, 2001;
94. *ArthroCare's* Statement In Opposition To Notice Of Pendency Of Other Action (including exhibits A-C), filed September 14, 2001.

Finally, the following is a list of co-pending applications relating to the technology covered by the '536 Patent:

Philip E. Eggers et al.
 Application No. 90/005,601
 Reexamination of Patent No. 5,697,536
 Page 10

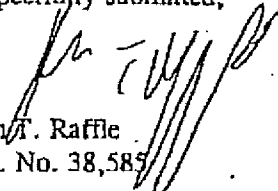


Application No.	Filing Date
08/761,096	05-Dec-1996
09/026,852	20-Feb-1998
09/041,934	13-Mar-1998
09/258,516	26-Feb-1999
09/539,147	30-Mar-2000
09/709,035	08-Nov-2000
09/758,403	10-Jan-2001
09/766,168	19-Jan-2001
09/836,940	17-Apr-2001
09/134,542	13-Aug-1998
09/262,281	04-Mar-1999
09/314,247	18-May-1999
09/438,592	12-Nov-1999
09/484,087	18-Jan-2000
09/504,530	15-Feb-2000
09/273,612	22-Mar-1999
09/360,075	23-Jul-1999
09/197,013	20-Nov-1998
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09/372,454	11-Aug-1999
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09/338,842	23-Jun-1999
09/347,390	06-Jul-1999
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09/735,426	12-Dec-2000
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09/507,366	18-Feb-2000
09/109,219	30-Jun-1998
09/477,832	05-Jan-2000
60/299,094	18-Jun-2001
09/357,774	21-Jul-1999
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09/457,201	06-Dec-1999
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09/314,611	19-May-1999
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09/293,231	16-Apr-1999
09/313,956	18-May-1999
09/718,160	20-Nov-2000
09/313,957	18-May-1999
60/276,863	16-Mar-2001
09/464,884	16-Dec-1999

Application No.	Filing Date
09/162,110	28-Sep-1998
09/562,650	01-May-2000
09/774,448	30-Jan-2001
09/482,141	12-Jan-2000
09/480,880	10-Jan-2000
09/074,020	06-May-1998
09/562,496	01-May-2000
09/603,833	26-Jun-2000
09/776,799	05-Feb-2001
09/839,427	20-Apr-2001
09/780,745	09-Feb-2001
60/304,297	09-Jul-2001
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09/412,103	04-Oct-1999
09/860,662	18-May-2001
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09/848,843	03-May-2001
09/665,441	19-Sep-2000
09/765,832	19-Jan-2001
09/708,962	08-Nov-2000
09/689,264	11-Oct-2000
09/676,194	28-Sep-2000
09/747,311	20-Dec-2000
09/679,394	03-Oct-2000
60/299,082	18-Jun-2001
60/299,095	18-Jun-2001
09/796,094	28-Feb-2001

Philip E. Eggers et al.
Application No. 90/005,601
Reexamination of Patent No. 5,697,536
Page 11

Respectfully submitted,


John T. Raffle
Reg. No. 38,585

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595 N. Pastoria Avenue
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90005601-101601



CERTIFICATE OF SERVICE

I hereby certify that on this 12th day of October, 2001, a true and correct copy of the document listed below was caused to be served on the attorneys of record at the following addresses as indicated:

1. Information Disclosure Statement and Form PTO-1449

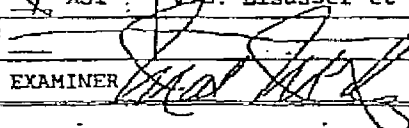
BY U.S. POSTAL SERVICE
FIRST CLASS MAIL

William C. Fuess
FUESS & DAVIDENAS
10951 Sorrento Valley Road, Suite II-G
San Diego, CA 92121-1613

Executed on October 12, 2001 at Sunnyvale, California.

Katie Zarzana

Page #10

FORM PTO-1449 (Modified)		Attorney Docket No. 16238-000610		Patent No.: 5,697,536		
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant: PHILIP E. EGGERS et al. Issue Date: December 16, 1997 Group:				
Reference Designation U.S. PATENT DOCUMENTS						
Examiner - Initial	Document No.	Date	Name	Class	Sub- class	Filing Date
AA	4,682,596	07/28,1987	Bales et al.	128	303	
AB	5,514,130	05/07/96	Baker	606	41	
AC	5,078,717	01/07/92	Parins et al.	606	48	
AD	5,697,281	12/16/97	Eggers et al.	604	114	
AE	5,697,882	12/16/97	Eggers et al.	604	114	
AF	5,697,909	12/16/97	Eggers et al.	604	114	
AG	5,725,524	03/10/98	Mulier et al.	606	41	
AH	5,609,151	03/11/97	Mulier et al.	128	642	
AI	4,043,342	08/23/97	Morrison, Jr.	128	303	
AJ	4,184,492	01/22/80	Meinke et al.	128	303	
AK	4,248,231	02/03/81	Herczog et al.	128	303	
FOREIGN PATENT DOCUMENTS						
	Document No.	Date	Country	Class	Sub- class	Translation (yes/no)
AL	97/00647	01/09/97	WIPO	A61B	17/39	
AM	97/00646	01/09/97	WIPO	A61B	17/39	
AN	EP 0 703 461	03/27/96	Europe	G01R	27/02	
AO	EP 0 754 437	01/22/97	Europe	A61B	17/39	
AP	93/20747	10/28/93	WIPO	A61B	5/00	
AQ	97/48345	12/24/97	WIPO	A61B	17/39	
AR	98/27880	07/02/98	WIPO	A61B	17/39	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)						
AS	Pearce, John A. (1986) Electrosurgery, pgs. 17, 69-75, 87, John Wiley & Sons, New York.					
AS1	V.E. Elsasser et al. Acta Medico Technica Vol. 24, No. 4, pp. 129-134 (1976).					
EXAMINER	 DATE CONSIDERED April 29, 2002					

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (Modified)

LIST OF PATENTS AND PUBLICATIONS FOREIGN
 APPLICANT'S INFORMATION DISCLOSURE
 STATEMENT
 (Use several sheets if necessary)

OCT 16 2001
 PATENT & TRADEMARK OFFICE

Attorney Docket No.
 16238-000610

Patent No.: 5,697,536

Applicant: PHILIP E. EGGERS et al.

Issue Date:
 December 16, 1997

Group:

Reference Designation U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date
AT	4,706,667	11/17/87	Roos	128	303	
AU	5,584,872	12/17/96	LaFontaine et al.	607	117	
AV	5,676,693	10/14/97	LaFontaine et al.	607	116	
AW	5,370,675	12/06/94	Edwards et al.	607	101	
AX	5,080,660	01/14/92	Buelna	606	45	
AY	5,417,687	05/23/95	Nardella et al.	606	32	
AZ	4,232,676	11/11/80	Herczog	128	303	
BA	4,033,351	07/05/77	Hetzel	128	303	
BB	5,112,330	05/12/92	Nishigaki et al.	606	46	
BC	5,843,019	12/01/98	Eggers et al.	604	22	
BD	5,871,469	02/16/99	Eggers et al.	604	114	
BE	5,007,908	04/16/91	Rydell	606	47	

FOREIGN PATENT DOCUMENTS

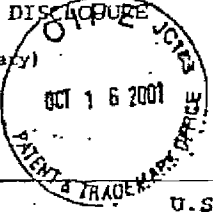
Examiner Initial	Document No.	Date	Country	Class	Sub-class	Translation (yes/no)
BF	2 327 350	01/27/99	UK	A61B	17/39	
BG	2 327 351	01/27/99	UK	A61B	17/39	
BH	2 327 352	01/27/99	UK	A61B	17/39	
BI	WO95/34259	12/21/95	WIPO	A61F	5/48	
BJ	57-57802	04/05/82	JP	A61B	1/00	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

BK	Buchelt, M. et al. "Excimer Laser Ablation of Fibrocartilage: An In Vitro and In Vivo Study," (1991) LASERS IN SURGERY AND MEDICINE 11:271-279.
BL	Costello, A. J. et al. "Nd:YAG Laser Ablation of the Prostate as a Treatment of Benign Prostatic Hypertrophy," (1992) LASERS IN SURGERY AND MEDICINE 12:121-124.

EXAMINER *[Signature]* DATE CONSIDERED April 29, 2002

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Attorney Docket No. 16238-000610		Patent No.: 5,697,536	
		Applicant: PHILIP E. EGGERS et al.			
		Issue Date: December 16, 1997		Group: 3739	

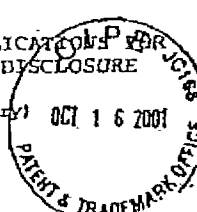
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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)	
<input checked="" type="checkbox"/>	CF J.W. Ramsey et al. Urological Research Vol. 13, pp. 99-102 (1985).
<input checked="" type="checkbox"/>	CG Slager et al. JACC 5(6):1382-6 (1985).

EXAMINER <i>[Signature]</i>	DATE CONSIDERED April 29, 2002
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Attorney Docket No. 16238-000610	Patent No.: 5,697,536
		Applicant: PHILIP E. EGGERS et al.	
Issue Date: December 16, 1997		Group: 3739	

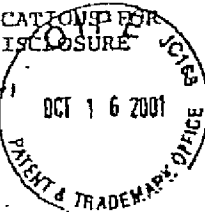
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CM	4,860,752	08/29/89	Turner	128	422	
CN	5,807,395	09/15/98	Mulier et al.	606	41	
CO	5,700,262	12/23/97	Acosta et al.	606	48	
CP	5,441,499	08/15/95	Fritzsche	606	45	
CQ	5,035,696	07/30/91	Rydell	606	47	
CR	5,749,869	05/12/98	Lindenmeier et al.	606	34	
CS	5,267,997	12/07/93	Parin et al.	606	38	
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CV	5,496,312	03/05/96	Klicek	606	34	

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Document No.	Date	Country	Class	Sub-class	Translation (yes/no)	
98/07468	02/26/98	WIPO	A61N	1/40		
Z 308 981	07/16/97	GB	A61B	17/36		
2 308 980	07/16/97	GB	A61B	17/36		
2 308 979	07/16/97	GB	A61B	17/36		

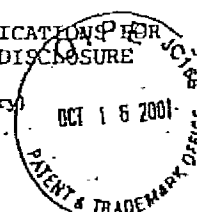
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)	
DA	R. Tucker et al., Abstract P14-11, p. 248, "A Bipolar Electrosurgical Turp Loop"
DB	R. Tucker et al., J. of Urology Vol. 141, pp. 662-665, (1989).
DC	R. Tucker et al., Urological Research Vol. 18, pp. 291-294 (1990).

EXAMINER: <i>[Signature]</i>	DATE CONSIDERED: April 29, 2002
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

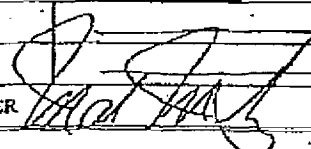
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		Applicant: PHILIP E. EGGERS et al.				
		Issue Date: December 16, 1997		Group: 3739		
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DD	5,810,809	09/22/98	Rydell	606	49	
DE	5,800,431	09/01/98	Brown	606	42	
DF	5,885,277	03/23/99	Korth	606	35	
DG	6,068,628	05/30/00	Fanton et al.	606	41	
DH	6,238,391	05/29/01	Olson et al.	606	41	
DI	6,254,600	07/03/01	Willink et al.	606	41	
DJ	6,264,652	07/24/01	Eggers et al.	606	41	
DK	6,013,076	01/11/00	Goble et al.	606	41	
DL	6,015,406	01/18/00	Goble et al.	606	41	
DM	6,027,501	02/22/00	Goble et al.	606	41	
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DO	6,039,734	03/21/00	Goble et al.	606	41	
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DQ	6,093,186	07/25/00	Goble et al.	606	34	
DR	6,074,386	06/13/00	Goble et al.	606	34	
DS	6,090,106	07/18/00	Goble et al.	606	41	
		FOREIGN PATENT DOCUMENTS				
	Document No.	Date	Country	Class	Sub- class	Translation (yes/no)
DT	98/27879	07/02/98	WIPO	A61B	17/36	
DU	57-117843	07/22/82	JP	A61B	17/39	
DV	99/51158	10/14/99	WIPO	A61B	17/39	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)						
DW	Kramolowsky et al. J. of Urology Vol. 143, pp. 275-277 (1990).					
DX	Kramolowsky et al. J. of Urology Vol. 146, pp. 669-674 (1991).					
DY	Slager et al. J. Kardiol. 76:Suppl. 6, 67-71 (1987).					
EXAMINER			DATE CONSIDERED: Apr 29, 2002			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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		Applicant: PHILIP E. EGGERS et al.	
		Issue Date: December 16, 1997	Group: 3739

Reference Designation		U.S. PATENT DOCUMENTS				
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<input checked="" type="checkbox"/> DZ	5,681,282	10/28/97	Eggers et al.	604	114	
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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)	
EXAMINER 	DATE CONSIDERED <u>April 29, 2002</u>

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Page #11

FORM PTO-1449 (Modified)			Attorney Docket No. 16238-000610		Patent No.: 5,697,536	
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)			Applicant: PHILIP E. EGGERS et al.			
			Issue Date: December 16, 1997		Group:	
Reference Designation			U.S. PATENT DOCUMENTS			
Examiner Initial	Document No.	Date	Name	Class	Sub- class	Filing Date
✓	2,056,377	08/16/33	Wappler	128	303.14	
	3,815,604	06/11/74	O'Malley et al.	128	305	
	3,828,780	08/13/74	Morrison Jr.	128	275.1	
	3,901,242	08/26/75	Storz	128	303.15	
	3,920,021	11/18/75	Hiltebrandt	128	303.17	
	3,939,839	02/24/76	Curtiss	128	303.15	
	3,970,080	07/20/76	Morrison	128	303.14	
	4,074,718	02/21/78	Morrison, Jr.	128	303.14	
	4,181,131	01/01/80	Ogiu	128	303.15	
	4,590,934	05/27/86	Mallis et al.	128	303.14	
	4,660,571	04/28/87	Hess et al.	128	784	
	4,785,823	11/22/88	Eggars et al.	128	692	
	4,805,616	02/21/89	Pao	128	303.17	
	4,832,048	05/23/89	Cohen	128	786	
	4,920,978	05/01/90	Colvin	128	784	
	4,936,281	06/26/90	Stasz	128	660.03	
	4,966,597	10/30/90	Cosman	606	50	
	5,009,656	04/23/91	Reinels	606	48	
	5,047,026	09/10/91	Rydell	606	48	
	5,047,027	09/10/91	Rydell	606	48	
	5,084,044	01/28/92	Quint	606	27	
	5,085,659	02/04/92	Rydell	606	47	
	5,088,997	02/18/92	Delahuerger et al.	606	42	
	5,167,659	12/01/92	Ohtomo et al.	606	40	
	5,171,311	12/15/92	Rydell et al.	606	48	
	5,207,657	05/04/93	Canady	606	40	
	5,217,459	06/08/93	Kamerling	606	48	
	5,306,238	04/26/94	Fleenor	606	42	
	5,423,882	06/13/95	Jackman et al.	607	127	
	5,454,809	10/03/95	Janssen	606	41	

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September 19, 2002

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FORM PTO-1449 (Modified)		Attorney Docket No. 16238-000610		Patent No.: 5,697,536	
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant: PHILIP E. EGGERS et al.			
		Issue Date: December 16, 1997		Group:	
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Examiner Initial	Document No.	Date	Name		Translation (yes/no)
S	2 313 949/ N 76 17587	01/07/77	Hiltebrandt et al.		Yes
	WO 90/03152	04/05/90	Considine et al.		
	DE 3930451 A1	03/21/91	Hoffman et al.		Yes
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S	Dobie, A. K., Bio-Medical Engineering, 05/69, pp. 206-216, "The Electrical Aspects of Surgical Diathermy", ✓				
	Honig, William M., IEEE Transactions on Biomedical Engineering, "The Mechanism of Cutting in Electrosurgery", ✓				
	Piety M.D., J. R. A., Gastroenterology V74, no. 3, pp. 527-534, 1978, "Electrosurgical Treatment of Experimental Bleeding Canine Gastric Ulcers: Development and Testing of a Computer Control and a Better Electrode", ✓				
	Dennis, M. B., Digestive Diseases and Sciences, V24, no. 11, pp. 845-848, "Evolution of Electrofulguration in Control of Bleeding of Experimental Gastric Ulcers", ✓				
	Barry, Kevin J., CRC Press, American Heart Journal, V117, pp. 332-341, "The effect of radiofrequency generated thermal energy on the mechanical and histologic characteristics of the arterial wall in vivo: Implications for radiofrequency angioplasty", ✓				
	Swain, CP, Gut V25, pp. 1424-1431, "Which Electrode?, A comparison of four endoscopic methods of electrocoagulation in experimental bleeding ulcers", ✓				
	Tucker, Robert D., Journal of Urology, V141 pp662-665, "A Comparison of Urologic Application of Bipolar Versus Monopolar Five French Electrosurgical Probes"				
S	Lee, Benjamin I., JACC V13, no. 5, pp. 1167-1175, "Thermal Compression and Molding of Atherosclerotic Vascular Tissue with Use of Radiofrequency Energy: Implications for Radiofrequency Balloon Angioplasty", ✓				
	Olsen MD, Bipolar Laparoscopic Cholecystectomy Lecture (marked confidential), 10/07/91				
EXAMINER	DATE CONSIDERED		September 19 2002		

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 603; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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June 19,
2002

PTO FAX NO.: 1 (703) 746-9251
Attn.: Examiner M. Mendez
Art Unit: 3739

Atty Docket No. 16238-000610

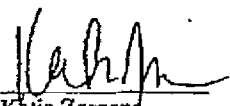
Page # 11

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that the following Information Disclosure Statement and PTO-1449 in re Application of Philip E. Eggers et al., Reexamination No. 90/005,601, for SYSTEM AND METHOD FOR ELECTROSURGICAL CUTTING AND ABLATION is being facsimile transmitted to the Patent and Trademark Office on the date shown below.

Number of pages being transmitted, including this page: 180

Dated: June 19, 2002


Katie Zarzana

20005601.1.1.1502

I hereby certify that this correspondence is being transmitted via facsimile to the Patent and Trademark Office at (703) 746-9251 addressed to:

PATENT

Attorney Docket No.: 16238-000610

Examiner Manuel Mendez

Assistant Commissioner for Patents,
Washington, D.C. 20231

On

By

Katie Zarzana

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of:

PHILIP E. EGGERS et al.

Application No. 90/005,601

Reexamination of Patent No.: 5,697,536

Issued: December 16, 1997

For: SYSTEM AND METHOD FOR
ELECTROSURGICAL CUTTING AND
ABLATION

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The references cited on attached form PTO-1449 are being called to the attention of the Examiner. These references were brought to Applicant's attention through the *Smith & Nephew* litigation referred to in the previously submitted IDS. Also being submitted are the following documents provided by the defendant, *Smith & Nephew*, in the aforementioned litigation:

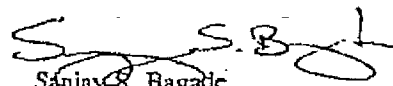
i) Ten pages from *Smith & Nephew's* supplemental invalidity response regarding the reexamination patent at issue (pages 1-9 and a cover page dated June 3, 2002).

Philip E. Eggers et al.
Application No. 90/005,601
Reexamination of Patent No. 5,697,536
Page 2

ii) 36 pages of "Exhibit A" from Smith & Nephew's supplemental invalidity response. Applicant notes that this document refers to Reference nos. 1-13, 15-31, 33-62, and 64-73 (Reference nos. 14, 32, and 63 are omitted). The Smith & Nephew's supplemental invalidity response cross references these Reference Nos. to the publication information. Applicant notes that Reference nos. 8, 15, 18, 19, 20, 22, 23, 25-27, 29, 31, 34, 35, 39, 41, 42, 45, 48, 49, 51, 53, 54, 58, 62, 64, 65, and 68 were previously considered during either reexamination or prosecution of the patent and are not included in this IDS.

20571106

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680 Vaqueros Ave.
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Sanjay S. Bagade
Reg. No. 42,280

FORM PTO-1449 (Modified)		Attorney Docket No. 16238-000610		Patent No.: 5,697,536		
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant: PHILIP E. EGGERS et al.				
		Issue Date: December 15, 1997		Group:		
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	3,901,242	08/26/75	Storz	128	303.15	
	3,920,021	11/18/75	Hiltebrandt	128	303.17	
	3,939,839	02/24/76	Curtiss	128	303.15	
	3,978,088	07/20/76	Morrison	128	303.14	
	4,074,718	02/21/78	Morrison, Jr.	128	303.14	
	4,181,131	01/01/80	Ogliu	128	303.15	
	4,590,934	05/27/86	Malis et al.	128	303.14	
	4,660,571	04/28/87	Hess et al.	128	784	
	4,785,823	11/22/88	Eggers et al.	128	692	
	4,805,616	02/21/89	Pao	128	303.17	
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	4,920,978	05/01/90	Colvin	128	784	
	4,936,281	06/26/90	Stasz	128	660.03	
	4,966,597	10/30/90	Cosman	606	50	
	5,009,656	04/23/91	Reimels	606	48	
	5,047,026	09/10/91	Rydell	606	48	
	5,047,027	09/10/91	Rydell	606	48	
	5,084,044	01/28/92	Quint	606	27	
	5,085,659	02/04/92	Rydell	606	47	
	5,088,997	02/18/92	Delahuerge et al.	606	42	
	5,167,659	12/01/92	Ohtomo et al.	606	40	
	5,171,311	12/15/92	Rydell et al.	606	48	
	5,207,657	05/04/93	Canady	606	40	
	5,217,459	06/08/93	Kamerling	606	48	
	5,306,238	04/26/94	Flaenor	606	42	
	5,423,882	06/13/95	Jackman et al.	607	127	
	5,454,809	10/03/95	Janssen	606	41	

Received from: 408 530 9143 > at 6/19/02 3:13:51 PM (Eastern Daylight Time)

September 19, 2002

FORM PTO-1449 (Modified)		Attorney Docket No. 16238-000610		Patent No.: 5,697,536	
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant: PHILIP E. EGGERS et al.			
		Issue Date: December 16, 1997		Group:	
FOREIGN PATENT DOCUMENTS					
Examiner Initials	Document No.	Date	Name		Translation (yes/no)
§	2 313 949/ N 76 17587	01/07/77	Hiltebrandt et al.	---	Yes
	NO 90/03152	04/05/90	Considine et al.	---	
	DE 3930451 A1	03/21/91	Hoffman et al.	---	Yes
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)					
§	Dobie, A. K., Bio-Medical Engineering, 05/69, pp. 206-216, "The Electrical Aspects of Surgical Diathermy"				
	Honig, William M., IEEE Transactions on Biomedical Engineering, "The Mechanism of Cutting in Electrosurgery"				
	Piercy M.D., J. R. A., Gastroenterology V74, no. 3, pp. 527-534, 1978, "Electrosurgical Treatment of Experimental Bleeding Canine Gastric Ulcers: Development and Testing of a Computer Control and a Better Electrode"				
	Dennis, M. B., Digestive Diseases and Sciences, V24, no. 11, pp. 845-848, "Evolution of Electrofulguration in Control of Bleeding of Experimental Gastric Ulcers"				
	Barry, Kevin J., CRC Press, American Heart Journal, V117, pp. 332-341, "The effect of radiofrequency generated thermal energy on the mechanical and histologic characteristics of the arterial wall in vivo: Implications for radiofrequency angioplasty"				
	Swain, CP, Gut V25, pp. 1424-1431, "Which Electrode?, A comparison of four endoscopic methods of electrocoagulation in experimental bleeding ulcers"				
	Tucker, Robert D., Journal of Urology, V141 pp662-665, "A Comparison of Urologic Application of Bipolar Versus Monopolar Five French Electrosurgical Probes"				
§	Lee, Benjamin I., JACC V13, no. 5, pp. 1157-1175, "Thermal Compression and Molding of Atherosclerotic Vascular Tissue with Use of Radiofrequency Energy: Implications for Radiofrequency Balloon Angioplasty"				
	Olsen MD, Bipolar Laparoscopic Cholecystectomy Lecture (marked confidential), 10/07/91				
EXAMINER	DATE CONSIDERED		September 19 2002		

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FISH & RICHARDSON P.C.

CONFIRMATION

Frederick F. Fish
1555-1530

W.K. Richardson
1555-1531

BY FAX AND MAIL:

June 3, 2002

Perry Clark, Esquire
Weil, Gotshal & Manges LLP
201 Redwood Shores Parkway
Redwood Shores, CA 94065

Re: Arthrocare Suit - Delaware
USDC-D. Del. - C.A. No. 01-504-SLR

Dear Perry:

I have enclosed Smith & Nephew's supplemental invalidity responses for the independent claims asserted against the Electroblade and Saphyre products. These responses are subject to and made without waiving Smith & Nephew's previous objections to ArthroCare's discovery requests. We reserve the right to revise these responses as discovery proceeds. In particular, we reserve the right to revise these responses after we have received meaningful discovery on ArthroCare's claim construction and infringement contentions, and after the Court has construed the asserted claims.

Very truly yours,


Kurtis MacFennin

50091503.doc

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WASHINGTON, DC

Smith & Nephew's Second Supplemental Response Re Invalidity

In addition to its previous objections, and without waiving any of those objections, Smith & Nephew also objects to providing its invalidity contentions at this time, since ArthroCare has refused to provide any of its contentions with respect to construction of the claims of its patents. Accordingly, Smith & Nephew reserves the right to supplement, amend, or otherwise modify its invalidity contentions as the case proceeds, and particularly after ArthroCare provides its proposed claim construction and/or after the Court construes the claims of ArthroCare's patents.

Nevertheless, as of the present time, Smith & Nephew incorporates its previous responses by reference, and further responds as follows:

Certain of Smith & Nephew's invalidity contentions are based on invalidity under 35 U.S.C. § 102 and/or § 103 in view of certain prior art references. In the interest of brevity and convenience, rather than repeat the full names of those references in connection with each such contention, Smith & Nephew will instead refer to those references by number, in accordance with the following table:

#	Issue/ Pub'n Date	Patent Number/ Publication	Inventor/Author	Title
1	08/16/33	US 2,056,377	F.C. Wappler	Electronic Instrument
2	05/00/69	Bio-Medical Engineering 206- 216	A.K. Dobbie	The Electrical Aspects of Surgical Diathermy
3	06/11/74	US 3,815,604	Conor C. O'Malley, Ralph M. Heintz, Sr.	Apparatus For Intraocular Surgery
4	08/13/74	US 3,828,780	Charles F. Morrison, Jr.	Combined Electrocoagulator- Suction Instrument
5	01/00/75	IEEE Transactions On Biomedical Engineering	William M. Honig	The Mechanism of Cutting in Electrosurgery

#	Issue/ Pub'n Date	Patent Number/ Publication	Inventor/Author	Title
6	08/26/75	US 3,901,242	Karl Storz	Electric Surgical Instrument
7	11/18/75	US 3,920,021	Siegfried Hiltbrandt	Coagulating Devices
8	00/00/76	Acta. Medicotechnica (Medizinal- Markt), Vol. 24, No. 4, 1976 129- 134	E. Elsasser and E. Roos	Über ein Instrument zur leckstromfreien transurethralen Resektion (Concerning An Instrument for Transurethral resection without leakage of current)
9	02/24/76	US 3,939,839	Lawrence E. Curtiss	Resectoscope and Electrode Therefor
10	07/20/76	US 3,970,088	Charles F. Morrison	Electrosurgical Devices Having Sesquipolar Electrode Structures Incorporated Therein
11	01/07/77	2 313 949/ N 76 17587	Siegfried Hiltbrandt et Ludwig Bonnet	Boucle de sectionnement à une ou deux branches pour resectoscope
12	00/00/78	Gastroenterology, Vol. 74, No. 3, 527-534, 1978	J.R.A. Piercey, M.D., D.C. Auth, Ph.D., P.E., F.E. Silverstein, M.D., H.R. Willard, Ph.D., M.B. Dennis, D.V.M., D.M. Ellefson, B.S., D.M. Davis, M.S.E.E., R.L. Protell, M.D. and C.E. Rubin, M.D.	Electrosurgical Treatment of Experimental Bleeding Canine Gastric Ulcers: Development and testing of a computer control and a better electrode
13	02/21/78	US 4,074,718	Charles F. Morrison, Jr.	Electrosurgical Instrument
14	06/06/78	US 4,092,986	Max Schneiderman	Constant Output Electrosurgical Unit
15	09/26/78	US 4,116,198 and its file history	Eberhard Roos	Electro-Surgical Device
16	11/00/79	Digestive Diseases and Sciences, Vol. 24, No. 11, 845-848	M.B. Dennis, J. Peoples, R. Hulet, D.C. Auth, R.L. Protell, C.E. Rubin, and F.E. Silverstein	Evolution of Electrofulguration in Control of Bleeding of Experimental Gastric Ulcers

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#	Issue/ Pub'n Date	Patent Number/ Publication	Inventor/Author	Title
17	01/01/80	US 4,181,131	Hisao Ogin	High Frequency Electrosurgical Instrument for Cutting Human Body Cavity Structures
18	01/22/80	US 4,184,492	Hans H. Meinke, Gerhard Flachenecker, Karl Fasteameier, Friedrich Landstodter, Heinz Lidkameier	Safety Circuitry for High Frequency Cutting and Coagulating Devices
19	11/11/80	US 4,232,676	Andrew Herzog	Surgical Cutting Instrument
20	02/03/81	US 4,248,231	Andrew Herzog and James A. Murphy	Surgical Cutting Instrument
21	02/00/82	CRC Press, American Heart Journal, Vol. 117, 332-341	Kevin J. Barry, MS, Jonathan Kaplan, MD, Raymond J. Connolly, Ph.D, Paul Nardella, BS, Benjamin I. Lee, MD, Gary J. Becker, MD, Bruce F. Waller, MD, and Allan D. Callow, MD, Ph.D	The effect of radiofrequency- generated thermal energy on the mechanical and histologic characteristics of the arterial wall in-vivo: Implications for radiofrequency angioplasty
22	04/27/82	US 4,326,529	James D. Doss and Richard L. Hutson	Corneal-Shaping Electrode
23	04/26/83	US 4,381,007	James D. Doss	Multipolar Corneal-Shaping Electrode with Flexible Removable Skirt
24	00/00/84	Gut, 25, 1424- 1431	C.P. Swain, TN Mills, E. Shemesh, Julia M. Dark, M.R. Lewin, J.S. Clifton, T.C. Northfield, P.B. Cotton, and P.R. Salmon	Which Electrode? A comparison of four endoscopic methods of electrocoagulation in experimental bleeding ulcers

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#	Issue/ Pub'n Date	Patent Number/ Publication	Inventor/Author	Title
25	00/00/85	Urological Research 13:99- 102	J.W.A. Ramsay, N.A. Shepherd, M. Butler, P.T. Gosling, R.A. Miller, D.M.A. Wallace, H.N. Whitfield	A Comparison of Bipolar and Monopolar Diathermy Probes in Experimental Animals
26	06/00/85	JACC Vol. 5, No. 6, 1382-6	Cornelis J. Slager, MSc, Catharina E. Essed, MD, Johan C.H. Schuurblers, BSc, Nicolaas Bom, Ph.D, Patrick W. Serruys, MD, Geert T. Meester, MD, FACC	Vaporization of Atherosclerotic Plaques by Spark Erosion
27	10/22/85	US 4,548,207	Harry G. Reimels	Disposable Coagulator
28	05/27/86	US 4,590,934	Jerry L. Malis, Leonard L. Malis, Robert R. Acorcey, David Solt	Bipolar Cutter/Coagulator
29	00/00/87	Kardiologie, Kardiol. 76: Supp. 6, 67-71 (1987)	C.J. Slager, A.C. Phaff, C.E. Essed, J.C.H. Schuurblers, N. Bom, V.A. Vandenbroucke, and P.W. Serruys	Spark Erosion of Arteriosclerotic Plaques
30	04/28/87	US 4,660,571	Stanley R. Hess, Terri Kovacs	Percutaneous Lead Having Radially Adjustable Electrode
31	06/23/87	US 4,674,499	David S.C. Pao	Coaxial Bipolar Probe
32	07/00/88	Valleylab Part Number 945 100 102 A	Valleylab, Inc.	Surgistat Service Manual
33	11/22/88	US 4,785,823	Philip E. Eggers, Robert F. Shaw	Methods And Apparatus For Performing In Vivo Blood Thermodilution Procedures
34	00/00/89	SPIE Vol. 1068 Catheter-based Sensing and Imaging Technology	Paul C. Nardella	Radio Frequency Energy and Impedance Feedback

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#	Issue/ Pub'n Date	Patent Number/ Publication	Inventor/Author	Title
35	00/00/89	The Organizing Committee of the 7 th World Congress on Endourology and ESWL Foundation for Advancement of International Science	Robert Tucker and Stefan Locning	A Bipolar Electrosurgical Turp Loop
36	02/21/89	US 4,805,616	David S.C. Pao	Bipolar Probes for Ophthalmic Surgery and Methods of Performing Anterior Capsulotomy
37	03/00/89	Journal of Urology Vol. 141, 662-665	Robert D. Tucker, Eugene V. Kramolowsky, Eric Bedell and Charles E. Platz	A Comparison of Urologic Application of Bipolar Versus Monopolar Five French Electrosurgical Probes
38	04/00/89	IACC Vol. 13 No. 5, 1167-75	Benjamin L. Lee, MD, FACC, Gary J. Becker, MD, Bruce F. Waller, MD, FACC, Kevin J. Barry, MS, Raymond J. Connolly, Ph.D, Jonathan Kaplan, MD, Alan R. Shapiro, MS, Paul C. Nardella, BS	Thermal Compression and Molding of Atherosclerotic Vascular Tissue With Use of Radiofrequency Energy: Implications for Radiofrequency Balloon Angioplasty
39	04/25/89	US 4,823,791	Frank D. D'Amelio, Dawn M. DeLemos, Dominick G. Esposito, Michelle D. Maxfield, Claude E. Petruzzi, Robert H. Quint	Electrosurgical Probe Apparatus
40	05/23/89	US 4,832,048	Donald Cohen	Suction Ablation Catheter
41	00/00/90	Urological Research 18:291- 294	R.D. Tucker, E.V. Kramolowsky, and C.E. Platz	In vivo effect of 5 French bipolar and monopolar electrosurgical probes on the porcine bladder

#	Issue/ Pub'n Date	Patent Number/ Publication	Inventor/Author	Title
42	02/00/90	Journal of Urology Vol. 143, 275-277	Eugene V. Kramolowsky and Robert D. Tucker	Use of 5F Bipolar Electrosurgical Probe in Endoscopic Urological Procedures
43	04/05/90	WO 90/03152	John Considine, John Colin	Electro-surgical Apparatus for Removing Tumours from Hollow Organs of the Body
44	05/01/90	US 4,920,978	David P. Colvin	Method and Apparatus for the Endoscopic Treatment of Deep Tumors Using RF Hyperthermia
45	06/05/90	US 4,931,047	Alan Broadwin, Charles Vassallo, Joseph N. Logan, Robert W. Hornlein	Method and Apparatus For Providing Enhanced Tissue Fragmentation And/Or Hemostasis
46	06/26/90	US 4,936,281	Peter Stasz	Ultrasonically Enhanced RF Ablation Catheter
47	10/30/90	US 4,966,597	Eric R. Cosman	Thermometric Cardiac Tissue Ablation Electrode with Ultra- Sensitive Temperature Detection
48	12/11/90	US 4,976,711	David J. Parins, Mark A. Rydell, Peter Stasz	Ablation Catheter With Selectively Deployable Electrodes
49	12/25/90	US 4,979,948	Leslie A. Geddes, Marvin H. Hinds, Joe D. Bourland, William D. Voorhees	Method and Apparatus for Thermally Destroying A Layer of An Organ
50	03/21/91	DE 3930451 A1	Ellen Hoffmann, Gerhard, Steinbeck, Rudi Mattnuller	Vorrichtung fur die Hochfrequenzkoagulation von biologischem Gewebe
51	04/16/91	US 5,007,908	Mark A. Rydell	Electrosurgical Instrument Having Needle Cutting Electrode And Spot-Coag Electrode
52	04/23/91	US 5,009,656	Harry G. Reimels	Bipolar Electrosurgical Instrument
53	07/30/91	US 5,035,696	Mark A. Rydell	Electrosurgical Instrument for Conducting Endoscopic Retrograde Sphincterotomy

#	Issue/ Pub'n Date	Patent Number/ Publication	Inventor/Author	Title
54	09/00/91	Journal of Urology Vol. 146, 669	Eugene V. Kramolowsky and Robert D. Tucker	The Urological Application of Electrosurgery
55	09/10/91	US 5,047,026	Mark A. Rydell	Electrosurgical Implement For Tunneling Through Tissue
56	09/10/91	US 5,047,027	Mark A. Rydell	Tumor Resector
57	10/07/91	Bipolar Laparoscopic Cholecystectomy Lecture	Dr. Olsen	Bipolar Laparoscopic Cholecystectomy
58	01/14/92	US 5,080,660	Terrence J. Bucha	Electrosurgical Electrode
59	01/28/92	US 5,084,044	Robert H. Quint	Apparatus for Endometrial Ablation and Method of Using Same
60	02/04/92	US 5,085,659	Mark A. Rydell	Biopsy Device With Bipolar Coagulation Capability
61	02/18/92	US 5,088,997	Louis Delahuerge, Robert B. Stoddard, Michael S. Klicek	Gas Coagulation Device
62	03/24/92	US 5,098,431	Mark A. Rydell	RF Ablation Catheter
63	04/28/92	US 5,108,391	Gerhard Flachenecker, Karl Fastenmeier, Heinz Lindenmeier	High-Frequency Generator For Tissue Cutting And For Coagulating In High- Frequency Surgery
64	05/12/92	US 5,112,330	Shinichi Nishigaki, Shiro Bito	Resectoscope Apparatus
65	06/16/92	US 5,122,138	Kim H. Manwaring	Tissue Vaporizing Accessory and Method for an Endoscope
66	12/01/92	US 5,167,659	Naoki Ohtomo; Shizuo Ninomiya	Blood Coagulating Apparatus
67	12/15/92	US 5,171,311	Mark A. Rydell, David J. Parins, Steven W. Berhow	Percutaneous Laparoscopic Cholecystectomy Instrument
68	03/30/93	US 5,197,963	David J. Parins	Electrosurgical Instrument with Extendable Sheath for Irrigation and Aspiration
69	05/04/93	US 5,207,675	Jerome Canady	Surgical Coagulation Device

#	Issue/ Pub'n Date	Patent Number/ Publication	Inventor/Author	Title
70	06/08/93	US 5,217,459	William Kernerling	Method and Instrument for Performing Eye Surgery
71	04/26/94	US 5,306,238	Richard P. Fleenor	Laparoscopic Electrosurgical Pencil
72	06/13/95	US 5,423,882	Warren M. Jackman, Wilton W. Webster, Jr.	Catheter Having Electrode With Annular Recess and Method of Using Same
73	10/03/95	US 5,454,809	Michael Janssen	Electrosurgical Catheter And Method For Resolving Artherosclerotic Plaque By Radio Frequency Sparking

1. U.S. Patent No. 5,697,536 ("the '536 patent")

A. Claim 45

Smith & Nephew contends that claim 45 of the '536 patent is anticipated by at least each of the following references: 3, 8, 9, 12, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 35, 36, 37, 38, 41, 42, 43, 45, 46, 48, 49, 51, 52, 53, 54, 57, 65, 66, 67, 70.

Smith & Nephew also contends that claim 45 of the '536 patent would have been obvious to one of ordinary skill in the art at the time of the invention in view of at least each of the following combinations of references, which Smith & Nephew contends would have been combined for at least the following reasons:

Combination	Motivation to Combine
Any one or more of 1, 4, 5, 6, 7, 10, 11, 13, 17, 30, 33, 39, 40, 44, 50, 55, 56, 58, 60, 61, 62, 64, 68, 69, 71, 72, 73 with any other one or more of the anticipating references listed above.	Each reference is directed to the same problem — applying electrical energy to a target site on a patient's body structure.
Any one or more of 2, 34, 47 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem — applying electrical energy to a target site on a patient's body structure.

Combination	Motivation to Combine
59 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem - applying electrical energy to a target site on a patient's body structure.

Attached as Exhibit A are tables showing, for each reference, where the limitations of claim 45 of the '536 patent may be found in the reference.

Smith & Nephew also contends that claim 45 of the '536 patent is invalid for the reasons given in Ethicon's Motion for Summary Judgment of Invalidity for Failure to Satisfy the Requirements of 35 U.S.C. §§ 102-103, Ethicon's Motion for Partial Summary Judgment of Invalidity for Failure to Satisfy the Requirements of 35 U.S.C. § 112, and supporting papers filed in *ArthroCare Corp. v. Ethicon, Inc.*, Case No. C-98-0609 WHO (N.D. Cal.).

2. U.S. Patent No. 5,697,882 ("the 882 patent")

A. Claim 28

Smith & Nephew contends that claim 28 of the '882 patent is anticipated by at least each of the following references: 5, 8, 12, 15, 21, 25, 26, 29, 41, 42, 44, 45, 57, 61, 65.

Smith & Nephew also contends that claim 28 of the '882 patent would have been obvious to one of ordinary skill in the art at the time of the invention in view of at least each of the following combinations of references, which Smith & Nephew contends would have been combined for at least the following reasons:

EXHIBIT A

2056377

The '536 Patent	Reference No. 1
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising: a high frequency power supply;	Reference No. 1 discloses a high frequency power supply, see, e.g., col. 1, lines 15-27.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 1 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 1, lines 40-55, Fig. 1.
an electrode terminal disposed near the distal end, and	Reference No. 1 discloses an electrode terminal disposed near the distal end, see, e.g., col. 1, lines 40-55, Fig. 1.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 1 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 1, lines 40-55, Fig. 1.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 1 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 1, lines 15-27.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

"The Electrical Aspects of Surgical"

The '536 Patent	Reference No. 2
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising: a high frequency power supply;	Reference No. 2 discloses a high frequency power supply, see, e.g., p. 207.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	
an electrode terminal disposed near the distal end, and	
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 2 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 207.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

3815604

The '536 Patent	Reference No. 3
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 3 discloses a high frequency power supply, see, e.g., col. 3, line 48 - col. 4, line 14.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 3 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 1, line 10 - col. 9, line 8.
an electrode terminal disposed near the distal end, and	Reference No. 3 discloses an electrode terminal disposed near the distal end, see, e.g., col. 1, line 10 - col. 9, line 8.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 3 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 1, line 10 - col. 9, line 8.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 3 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 3, line 48 - col. 4, line 14.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 3 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 9, lines 9-25.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 3 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 9, lines 9-25.

3828780

The '536 Patent	Reference No. 4
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 4 discloses a high frequency power supply, see, e.g., col. 1, line 5 - col. 2, line 2.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 4 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 1, line 5 - col. 2, line 2.
an electrode terminal disposed near the distal end, and	Reference No. 4 discloses an electrode terminal disposed near the distal end, see, e.g., col. 1, line 5 - col. 2, line 2.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 4 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 1, line 5 - col. 2, line 2.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 4 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 1, line 5 - col. 2, line 2.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

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The '536 Patent	Reference No. 5
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 5 discloses a high frequency power supply, see, e.g., pages 58-60.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 5 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., pages 58-60.
an electrode terminal disposed near the distal end, and	Reference No. 5 discloses an electrode terminal disposed near the distal end, see, e.g., pages 58-60.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 5 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., pages 58-60.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 5 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., pages 58-60.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

The '536 Patent	3901242 Reference No. 6
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 6 discloses a high frequency power supply, see, e.g., col. 3, lines 3-7.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 6 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 3, lines 3-7, Fig. 1-2.
an electrode terminal disposed near the distal end, and	Reference No. 6 discloses an electrode terminal disposed near the distal end, see, e.g., col. 3, lines 3-7, Fig. 1-2.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 6 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 3, lines 3-7, Fig. 1-2.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 6 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 3, lines 3-7.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

3920021

The '536 Patent	Reference No. 7
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 7 discloses a high frequency power supply, see, e.g., col. 2, lines 44-66.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 7 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 4, lines 4-19; col. 2, lines 44-66.
an electrode terminal disposed near the distal end, and	Reference No. 7 discloses an electrode terminal disposed near the distal end, see, e.g., col. 4, lines 4-19; col. 2, lines 44-66.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 7 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 4, lines 4-19; col. 2, lines 44-66.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 7 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 44-66.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

Egger & Koss Article

The '536 Patent	Reference No. 8
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 8 discloses a high frequency power supply, see, e.g., p. 1.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 8 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 3, 7.
an electrode terminal disposed near the distal end, and	Reference No. 8 discloses an electrode terminal disposed near the distal end, see, e.g., p. 3, 7.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 8 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 3, 7.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 8 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 1.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 8 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 4-5.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 8 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 4-5.

3939839.

The '536 Patent	Reference No. 9
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 9 discloses a high frequency power supply, see, e.g., col. 2, lines 33-52.
an electrosurgical probe comprising a shaft having a proximal end and a distal end;	Reference No. 9 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 40-63.
an electrode terminal disposed near the distal end, and	Reference No. 9 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, lines 40-63.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 9 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 40-63.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 9 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 33-52.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 9 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 2, lines 40-63.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 9 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 2, lines 40-63.

3970082

The '536 Patent	Reference No. 10
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 10 discloses a high frequency power supply, see, e.g., col. 4, lines 18-28.
an electrosurgical probe comprising a shaft having a proximal end and a distal end;	Reference No. 10 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 4, lines 18-28.
an electrode terminal disposed near the distal end, and	Reference No. 10 discloses an electrode terminal disposed near the distal end, see, e.g., col. 4, lines 18-28.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 10 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 4, lines 18-28.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 10 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 4, lines 18-28.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

2313949 / 27617583

The '536 Patent	Reference No. 11
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising: a high frequency power supply;	Reference No. 11 discloses a high frequency power supply, see, e.g., p. 2.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 11 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 2.
an electrode terminal disposed near the distal end, and	Reference No. 11 discloses an electrode terminal disposed near the distal end, see, e.g., p. 2.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 11 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 2.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 11 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 2.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

Piercy et al article

The '536 Patent	Reference No. 12
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising: a high frequency power supply;	Reference No. 12 discloses a high frequency power supply, see, e.g., p. 528.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 12 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 530.
an electrode terminal disposed near the distal end, and	Reference No. 12 discloses an electrode terminal disposed near the distal end, see, e.g., p. 530.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 12 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 530.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 12 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 528.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 12 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 529.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 12 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 529.

4074718

The '536 Patent	Reference No. 13
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 13 discloses a high frequency power supply, see, e.g., col. 4, line 15; col. 7, lines 38-50.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 13 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 6, lines 55-70.
an electrode terminal disposed near the distal end, and	Reference No. 13 discloses an electrode terminal disposed near the distal end, see, e.g., col. 6, lines 55-70.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 13 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 6, lines 55-70.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 13 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 4, line 15; col. 7, lines 38-50.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

4116198

The '536 Patent	Reference No. 15
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 15 discloses a high frequency power supply, see, e.g., col. 1, lines 5-17.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 15 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 4, line 51-col. 5, line 20.
an electrode terminal disposed near the distal end, and	Reference No. 15 discloses an electrode terminal disposed near the distal end, see, e.g., col. 4, line 51-col. 5, line 20.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 15 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 4, line 51-col. 5, line 20.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 15 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 1, lines 5-17.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 15 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 1, lines 52-56; col. 7, lines 59-62.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 15 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 1, lines 52-56; col. 7, lines 59-62.

Dennis et al.

The '536 Patent	Reference No. 16
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 16 discloses a high frequency power supply, see, e.g., pp. 845-46.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 16 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 845.
an electrode terminal disposed near the distal end, and	Reference No. 16 discloses an electrode terminal disposed near the distal end, see, e.g., p. 845.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 16 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 845.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 16 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., pp. 845-46.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 16 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 846.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 16 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 846.

4181131

The '536 Patent	Reference No. 17
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 17 discloses a high frequency power supply, see, e.g., col. 6, lines 1-30.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 17 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 6, lines 1-30.
an electrode terminal disposed near the distal end, and	Reference No. 17 discloses an electrode terminal disposed near the distal end, see, e.g., col. 6, lines 1-30.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 17 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 6, lines 1-30.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 17 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 6, lines 1-30.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

4184492

The '536 Patent	Reference No. 18
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising: a high frequency power supply;	Reference No. 18 discloses a high frequency power supply, see, e.g., col. 1, lines 12-37.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 18 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 1, lines 12-37.
an electrode terminal disposed near the distal end, and	Reference No. 18 discloses an electrode terminal disposed near the distal end, see, e.g., col. 1, lines 12-37.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 18 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 1, lines 12-37.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 18 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 1, lines 12-37.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 18 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 3, line 67 - col. 4, line 3.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 18 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 3, line 67 - col. 4, line 3.

4232676

The '536 Patent	Reference No. 19
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising: a high frequency power supply;	Reference No. 19 discloses a high frequency power supply, see, e.g., col. 2, lines 33-46.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 19 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 33-46.
an electrode terminal disposed near the distal end, and	Reference No. 19 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, lines 33-46.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 19 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 33-46.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 19 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 33-46.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 19 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 3, lines 34-38.
the electrically conducting fluid generates a current flow path between the return electrode and the	In Reference No. 19 the electrically conducting fluid generates a current flow path between the

electrode terminal.	return electrode and the electrode terminal, see, e.g., col. 1, lines 34-38.
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4248231

The '536 Patent	Reference No. 20
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 20 discloses a high frequency power supply, see, e.g., col. 2, lines 35-58.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 20 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 35-58.
an electrode terminal disposed near the distal end, and	Reference No. 20 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, lines 35-58.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 20 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 35-58.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 20 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 35-58.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 20 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 2, lines 35-58.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 20 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 2, lines 35-58.

Barry et al

The '536 Patent	Reference No. 21
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 21 discloses a high frequency power supply, see, e.g., p. 333.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 21 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 333.
an electrode terminal disposed near the distal end, and	Reference No. 21 discloses an electrode terminal disposed near the distal end, see, e.g., p. 333.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 21 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 333.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 21 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 333.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 21 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 334.
the electrically conducting fluid generates a current flow path between the return electrode and the	In Reference No. 21 the electrically conducting fluid generates a current flow path between the

electrode terminal.	return electrode and the electrode terminal, see, e.g., p. 334.
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The '536 Patent	Reference No. 22
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 22 discloses a high frequency power supply, see, e.g., col. 2, lines 21-58.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 22 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 21-58.
an electrode terminal disposed near the distal end, and	Reference No. 22 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, lines 21-58.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 21 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 21-58.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 22 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 21-58.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 22 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 2, lines 21-58.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 22 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 2, lines 21-58.

The '536 Patent	Reference No. 23
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 23 discloses a high frequency power supply, see, e.g., col. 2, lines 42-68; col. 3, lines 34-38.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 23 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 42-68; col. 3, lines 34-38.
an electrode terminal disposed near the distal end, and	Reference No. 23 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, lines 42-68; col. 3, lines 34-38.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 23 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 42-68; col. 3, lines 34-38.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 23 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 42-68; col. 3, lines 34-38.

an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 23 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 2, lines 42-68; col. 3, line 66.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 23 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 2, lines 42-68; col. 3, lines 34-38.

The '536 Patent	Swain et al. Reference No. 24
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 24 discloses a high frequency power supply, see, e.g., p. 1425.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 24 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 1425.
an electrode terminal disposed near the distal end, and	Reference No. 24 discloses an electrode terminal disposed near the distal end, see, e.g., p. 1425.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 24 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 1425.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 24 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 1425.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 24 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 1425.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 24 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 1425.

The '536 Patent	Pamson et al. Reference No. 25
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 25 discloses a high frequency power supply, see, e.g., p. 99.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 25 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 99.
an electrode terminal disposed near the distal end, and	Reference No. 25 discloses an electrode terminal disposed near the distal end, see, e.g., p. 99.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 25 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 99.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 25 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 99.
an electrically conducting fluid supply for directing	Reference No. 25 discloses an electrically

electrically conducting fluid to the target site such that	conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 99.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 25 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 99.

Slager et al
Reference No. 26

The '536 Patent	Reference No. 26
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 26 discloses a high frequency power supply, see, e.g., p. 1383.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 26 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 1383.
an electrode terminal disposed near the distal end, and	Reference No. 26 discloses an electrode terminal disposed near the distal end, see, e.g., p. 1383.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 26 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 1383.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 26 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 1383.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 26 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 1383.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 26 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 1383.

Ree 4548207
Reference No. 27

The '536 Patent	Reference No. 27
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 27 discloses a high frequency power supply, see, e.g., col. 2, lines 38-66.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 27 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 38-66.
an electrode terminal disposed near the distal end, and	Reference No. 27 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, lines 38-66.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 27 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 38-66.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 27 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 38-66.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such	Reference No. 27 discloses an electrically conducting fluid supply for directing electrically

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P. 29

that	conducting fluid to the target site, see, e.g., col. 1, lines 48-53.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 27 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 3, lines 48-53.

4540924

The '536 Patent	Reference No. 28
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 28 discloses a high frequency power supply, see, e.g., col. 2, lines 23-33.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 28 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 23-33.
an electrode terminal disposed near the distal end, and	Reference No. 28 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, lines 23-33.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 28 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 23-33.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 28 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 23-33.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 28 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 2, line 18.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 28 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 2, line 18.

Sanger et al

The '536 Patent	Reference No. 29
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 29 discloses a high frequency power supply, see, e.g., p. 67-68.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 29 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 67-68.
an electrode terminal disposed near the distal end, and	Reference No. 29 discloses an electrode terminal disposed near the distal end, see, e.g., p. 67-68.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 29 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 67-68.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 29 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 67-68.
an electrically conducting fluid supply for directing	Reference No. 29 discloses an electrically

electrically conducting fluid to the target site such that	conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 68.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 29 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 68.

4.660571

The '536 Patent	Reference No. 30
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 30 discloses a high frequency power supply, see, e.g., col. 4, line 32 - col. 5, line 10.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 30 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 4, line 32 - col. 5, line 10.
an electrode terminal disposed near the distal end, and	Reference No. 30 discloses an electrode terminal disposed near the distal end, see, e.g., col. 4, line 32 - col. 5, line 10.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 30 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 4, line 32 - col. 5, line 10.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 30 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 4, line 32 - col. 5, line 10.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

4.674499

The '536 Patent	Reference No. 31
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 31 discloses a high frequency power supply, see, e.g., col. 2, lines 45-58.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 31 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 45-58.
an electrode terminal disposed near the distal end, and	Reference No. 31 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, lines 45-58.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 31 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 45-58.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 31 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 45-58.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such	Reference No. 31 discloses an electrically conducting fluid supply for directing electrically

that	conducting fluid to the target site, see, e.g., col. 3, line 31; col. 7, line 65.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 31 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 3, line 31; col. 7, line 65.

4785823

The '536 Patent	Reference No. 33
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 33 discloses a high frequency power supply, see, e.g., col. 2, lines 45-69.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 33 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 45-69.
an electrode terminal disposed near the distal end, and	Reference No. 33 discloses an electrode terminal, disposed near the distal end, see, e.g., col. 2, lines 45-69.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 33 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 45-69.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 33 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 45-69.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

Nardella article

The '536 Patent	Reference No. 34
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 34 discloses a high frequency power supply, see, e.g., p. 42.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	
an electrode terminal disposed near the distal end, and	
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 34 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 42.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the	

electrode terminal.	
The '536 Patent	Tucker et al article Reference No. 35
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 35 discloses a high frequency power supply, see, e.g., p. 248.
an electrosurgical probe comprising a shaft having a proximal end and a distal end;	Reference No. 35 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 248.
an electrode terminal disposed near the distal end, and	Reference No. 35 discloses an electrode terminal disposed near the distal end, see, e.g., p. 248.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 35 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 248.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 35 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 248.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 35 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 248.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 35 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 248.

The '536 Patent	4805616 Reference No. 36
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 36 discloses a high frequency power supply, see, e.g., col. 4, lines 4-39.
an electrosurgical probe comprising a shaft having a proximal end and a distal end;	Reference No. 36 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 4, lines 4-39.
an electrode terminal disposed near the distal end, and	Reference No. 36 discloses an electrode terminal disposed near the distal end, see, e.g., col. 4, lines 4-39.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 36 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 4, lines 4-39.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 36 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 4, lines 4-39.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 36 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 7, lines 30-32.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 36 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g.,

col. 7, lines 30-32.	
<i>Tucker et al. article</i>	
The '536 Patent	Reference No. 37
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising: a high frequency power supply;	Reference No. 37 discloses a high frequency power supply, see, e.g., p. 662-63.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 37 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 662-63.
an electrode terminal disposed near the distal end, and	Reference No. 37 discloses an electrode terminal disposed near the distal end, see, e.g., p. 662-63.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 37 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 662-63.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 37 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 662-63.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 37 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 663.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 37 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 663.
<i>Lee et al. article</i>	
The '536 Patent	Reference No. 38
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising: a high frequency power supply;	Reference No. 38 discloses a high frequency power supply, see, e.g., p. 1168.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 38 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 1168-1169.
an electrode terminal disposed near the distal end, and	Reference No. 38 discloses an electrode terminal disposed near the distal end, see, e.g., p. 1168-1169.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 38 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 1168-1169.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 38 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 1168.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 38 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 1168.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 38 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 1168.

4823791

The '536 Patent	Reference No. 39
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 39 discloses a high frequency power supply, see, e.g., col. 5, lines 1-47.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 39 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 5, lines 1-47.
an electrode terminal disposed near the distal end, and	Reference No. 39 discloses an electrode terminal disposed near the distal end, see, e.g., col. 5, lines 1-47.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 39 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 5, lines 1-47.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 39 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 5, lines 1-47.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

4832048

The '536 Patent	Reference No. 40
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 40 discloses a high frequency power supply, see, e.g., col. 2, lines 62-65.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 40 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 19-22.
an electrode terminal disposed near the distal end, and	Reference No. 40 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, lines 19-22.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 40 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 19-22.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 40 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 62-65.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

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Tucker et al article

The '536 Patent	Reference No. 41
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 41 discloses a high frequency power supply, see, e.g., p. 291.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 41 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 292.
an electrode terminal disposed near the distal end, and	Reference No. 41 discloses an electrode terminal disposed near the distal end, see, e.g., p. 292.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 41 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 292.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 41 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 291.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 41 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 291.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 41 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 291.

Kramolowski

The '536 Patent	Reference No. 42
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 42 discloses a high frequency power supply, see, e.g., p. 275.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 42 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 275.
an electrode terminal disposed near the distal end, and	Reference No. 42 discloses an electrode terminal disposed near the distal end, see, e.g., p. 275.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 42 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 275.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 42 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 275.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 42 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 275.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 42 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 275.

Wo 90/03152

The '536 Patent	Reference No. 43
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 43 discloses a high frequency power supply, see, e.g., p. 2.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 43 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 8, 10.
an electrode terminal disposed near the distal end, and	Reference No. 43 discloses an electrode terminal disposed near the distal end, see, e.g., p. 8, 10.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 43 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 8, 10.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 43 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 2.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 43 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 11.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 43 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 11.

4920978

The '536 Patent	Reference No. 44
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 44 discloses a high frequency power supply, see, e.g., col. 2, lines 26-51.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 44 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 26-51.
an electrode terminal disposed near the distal end, and	Reference No. 44 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, lines 26-51.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 44 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 26-51.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 44 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 26-51.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

4931047

The '536 Patent	Reference No. 45
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 45 discloses a high frequency power supply, see, e.g., col. 4, line 21 - col. 5, line 6.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 45 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 4, line 40.
an electrode terminal disposed near the distal end, and	Reference No. 45 discloses an electrode terminal disposed near the distal end, see, e.g., col. 4, line 40.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 45 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 4, line 40.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 45 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 4, line 21 - col. 5, line 6.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 45 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 3, lines 48-55.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 45 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 3, lines 48-55.

4936281

The '536 Patent	Reference No. 46
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 46 discloses a high frequency power supply, see, e.g., col. 2, lines 31 - 53.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 46 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, line 31 - 53.
an electrode terminal disposed near the distal end, and	Reference No. 46 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, line 31 - 53.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 44 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, line 31 - 53.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 46 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, line 31 - 53.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 46 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 6, line 42.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 46 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g.,

	col. 6, line 42.
4966547	
The '536 Patent	Reference No. 47
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 47 discloses a high frequency power supply, see, e.g., col. 1, line 34.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	
an electrode terminal disposed near the distal end, and	
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 47 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 1, line 34.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	
4976711	
The '536 Patent	Reference No. 48
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 48 discloses a high frequency power supply, see, e.g., col. 2, line 28.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 48 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, line 28.
an electrode terminal disposed near the distal end, and	Reference No. 48 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, line 28.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 48 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, line 28.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 48 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, line 28.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 48 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 6, line 28; col. 4, line 6.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 48 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 6, line 28; col. 4, line 6.

4979948

The '536 Patent	Reference No. 49
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 49 discloses a high frequency power supply, see, e.g., col. 1, line 55.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 49 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 1, line 55.
an electrode terminal disposed near the distal end, and	Reference No. 49 discloses an electrode terminal disposed near the distal end, see, e.g., col. 1, line 55.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 49 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 1, line 55.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 49 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 1, line 55.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 49 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 1, line 65.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 49 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 1, line 65.

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The '536 Patent	Reference No. 50
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 50 discloses a high frequency power supply, see, e.g., col. 2, lines 21-63.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 50 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 21-63.
an electrode terminal disposed near the distal end, and	Reference No. 50 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, lines 21-63.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 50 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 21-63.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 50 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 21-63.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

4007908

The '536 Patent	Reference No. 51
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 51 discloses a high frequency power supply, see, e.g., col. 2, line 41 - col. 3, line 58.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 51 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, line 41 - col. 3, line 58.
an electrode terminal disposed near the distal end, and	Reference No. 51 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, line 41 - col. 3, line 58.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 51 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, line 41 - col. 3, line 58.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 51 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, line 41 - col. 3, line 58.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 51 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 3, line 53.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 51 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 3, line 53.

5009456

The '536 Patent	Reference No. 52
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 52 discloses a high frequency power supply, see, e.g., col. 3, lines 1-32.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 52 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 3, lines 1-32.
an electrode terminal disposed near the distal end, and	Reference No. 52 discloses an electrode terminal disposed near the distal end, see, e.g., col. 3, lines 1-32.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 52 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 3, lines 1-32.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 52 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 3, lines 1-32.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 52 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 2, line 26.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 52 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g.,

col. 2, line 26.

5035 696

The '536 Patent	Reference No. 53
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 53 discloses a high frequency power supply, see, e.g., col. 2, lines 28-55.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 53 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 28-55.
an electrode terminal disposed near the distal end, and	Reference No. 53 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, line 28.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 53 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 28-55.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 53 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 28-55.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 53 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 3, line 63; col. 2, line 1.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 53 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 3, line 63; col. 2, line 1.

Kramolowski del. article

The '536 Patent	Reference No. 54
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 54 discloses a high frequency power supply, see, e.g., p. 670.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 54 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 669.
an electrode terminal disposed near the distal end, and	Reference No. 54 discloses an electrode terminal disposed near the distal end, see, e.g., p. 669.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 54 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 669.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 54 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 670.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 54 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 672.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 54 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 672.

5047 026

The '536 Patent	Reference No. 55
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 55 discloses a high frequency power supply, see, e.g., col. 2, lines 7-46.
an electrosurgical probe comprising a shaft having a proximal end and a distal end;	Reference No. 55 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 7-46.
an electrode terminal disposed near the distal end, and	Reference No. 55 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, lines 7-46.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 55 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 7-46.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 55 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 7-46.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

5047 027

The '536 Patent	Reference No. 56
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 56 discloses a high frequency power supply, see, e.g., col. 1, line 61 - col. 2, line 12.
an electrosurgical probe comprising a shaft having a proximal end and a distal end;	Reference No. 56 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 1, line 61 - col. 2, line 12.
an electrode terminal disposed near the distal end, and	Reference No. 56 discloses an electrode terminal disposed near the distal end, see, e.g., col. 1, line 61 - col. 2, line 12.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 56 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 1, line 61 - col. 2, line 12.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 56 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 1, line 61 - col. 2, line 12.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

Olsen article

The '536 Patent	Reference No. 57
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising: a high frequency power supply;	Reference No. 57 discloses a high frequency power supply, see, e.g., p. 3.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 57 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 3.
an electrode terminal disposed near the distal end, and	Reference No. 57 discloses an electrode terminal disposed near the distal end, see, e.g., p. 3.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 57 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 3.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 57 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 3.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 57 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 3.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 57 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 6.

5080660

The '536 Patent	Reference No. 58
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising: a high frequency power supply;	Reference No. 58 discloses a high frequency power supply, see, e.g., col. 3, lines 9-49.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 58 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 3, lines 9-49.
an electrode terminal disposed near the distal end, and	Reference No. 58 discloses an electrode terminal disposed near the distal end, see, e.g., col. 3, lines 9-49.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 58 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 3, lines 9-49.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 58 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 3, lines 9-49.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

5084 044

The '536 Patent	Reference No. 59
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 59 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 3, lines 5-36.
an electrode terminal disposed near the distal end, and	Reference No. 59 discloses an electrode terminal disposed near the distal end; see, e.g., col. 3, lines 5-36.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 59 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 3, lines 5-36.
a return electrode electrically coupled to the electrosurgical power supply; and	
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

5085 659

The '536 Patent	Reference No. 60
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 60 discloses a high frequency power supply, see, e.g., col. 4, line 45.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 60 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 3, line 35.
an electrode terminal disposed near the distal end, and	Reference No. 60 discloses an electrode terminal disposed near the distal end, see, e.g., col. 3, line 35.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 60 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 3, line 35.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 60 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 4, line 45.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

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5088797

The '536 Patent	Reference No. 61
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 61 discloses a high frequency power supply, see, e.g., col. 3, line 30.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 61 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 3, line 30.
an electrode terminal disposed near the distal end, and	Reference No. 61 discloses an electrode terminal disposed near the distal end, see, e.g., col. 3, line 30.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 61 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 3, line 30.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 61 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 3, line 30.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

5098431

The '536 Patent	Reference No. 62
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 62 discloses a high frequency power supply, see, e.g., col. 2, line 35.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 62 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, line 20.
an electrode terminal disposed near the distal end, and	Reference No. 62 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, line 20.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 61 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, line 20.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 62 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, line 35.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

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5112330

The '536 Patent	Reference No. 64
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 64 discloses a high frequency power supply, see, e.g., col. 2, line 5.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 64 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 4, line 25.
an electrode terminal disposed near the distal end, and	Reference No. 64 discloses an electrode terminal disposed near the distal end, see, e.g., col. 4, line 25.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 64 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 4, line 25.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 64 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, line 5.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

5122138

The '536 Patent	Reference No. 65
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 65 discloses a high frequency power supply, see, e.g., col. 5, line 34.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 65 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 5, line 34.
an electrode terminal disposed near the distal end, and	Reference No. 65 discloses an electrode terminal disposed near the distal end, see, e.g., col. 5, line 34.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 65 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 5, line 34.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 65 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 5, line 34.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 65 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 2, line 10; col. 6, line 65.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 65 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 2, line 10; col. 6, line 65.

5167659

The '536 Patent	Reference No. 66
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 66 discloses a high frequency power supply, see, e.g., col. 2, line 1.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 66 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 3, line 14.
an electrode terminal disposed near the distal end, and	Reference No. 66 discloses an electrode terminal disposed near the distal end, see, e.g., col. 3, line 14.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 66 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 3, line 14.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 66 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, line 1.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 66 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 2, line 10.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 66 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 2, line 10.

5171311

The '536 Patent	Reference No. 67
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 67 discloses a high frequency power supply, see, e.g., col. 2, line 35.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 67 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, line 35.
an electrode terminal disposed near the distal end, and	Reference No. 67 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, line 35.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 67 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, line 35.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 67 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, line 35.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 67 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 4, line 10.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 67 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 4, line 10.

5197963

The '536 Patent	Reference No. 68
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising: a high frequency power supply;	Reference No. 68 discloses a high frequency power supply, see, e.g., col. 3, line 25.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 68 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 3, line 25.
an electrode terminal disposed near the distal end, and	Reference No. 68 discloses an electrode terminal disposed near the distal end, see, e.g., col. 3, line 25.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 68 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 3, line 25.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 68 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 3, line 25.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

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5207 675

The '536 Patent	Reference No. 69
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising: a high frequency power supply;	Reference No. 69 discloses a high frequency power supply, see, e.g., col. 3, line 20.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 69 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 3, line 20.
an electrode terminal disposed near the distal end, and	Reference No. 69 discloses an electrode terminal disposed near the distal end; see, e.g., col. 3, line 20.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 69 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 3, line 20.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 69 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 3, line 20.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

5217459

The '536 Patent	Reference No. 70
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising: a high frequency power supply;	Reference No. 70 discloses a high frequency power supply, see, e.g., col. 2, line 38.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 70 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, line 38.
an electrode terminal disposed near the distal end, and	Reference No. 70 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, line 38.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 70 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, line 38.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 70 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, line 38.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 70 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 3, line 1.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 70 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 3, line 1.

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5306238

The '536 Patent	Reference No. 71
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 71 discloses a high frequency power supply, see, e.g., col. 3, line 43 - col. 4, line 12.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 71 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., figs.
an electrode terminal disposed near the distal end, and	Reference No. 71 discloses an electrode terminal disposed near the distal end, see, e.g., figs.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 71 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., figs.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 71 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 3, line 43 - col. 4, line 18.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

2423882

The '536 Patent	Reference No. 72
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 72 discloses a high frequency power supply, see, e.g., col. 2, line 30.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 72 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, line 30.
an electrode terminal disposed near the distal end, and	Reference No. 72 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, line 30.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 72 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, line 30.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 72 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, line 30.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

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5454 809

The '536 Patent	Reference No. 73
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising: a high frequency power supply;	Reference No. 73 discloses a high frequency power supply, see, e.g., col. 4, line 35.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 73 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 4, line 35.
an electrode terminal disposed near the distal end, and	Reference No. 73 discloses an electrode terminal disposed near the distal end, see, e.g., col. 4, line 35.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 73 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 4, line 35.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 73 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 4, line 35.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	

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Washington, D.C. 20231

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
90/005,601	DECEMBER 30, 1999	5,697,536	16238-00610

ARTHROCARE CORPORATION
680 VAQUEROS AVENUE
SUNNYVALE CA 94085-3523

EXAMINER

ART UNIT PAPER

MENDEZ, M. 13

DATE MAILED: NOVEMBER 15, 2002

AK

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

2005504.11.15.02

cc: William C. Fuess, 3rd party
attorney

Office Action in Ex Parte Reexamination	Control No. 90/005,601	Patent Under Reexamination	
	Examiner Manuel Mendez	Art Unit 3763	

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -

a ☒ Responsive to the communication(s) filed on 19 June 2002. b ☐ This action is made FINAL.

c ☐ A statement under 37 CFR 1.530 has not been received from the patent owner.

2 (two)

A shortened statutory period for response to this action is set to expire 2 month(s) from the mailing date of this letter. Failure to respond within the period for response will result in termination of the proceeding and issuance of an *ex parte* reexamination certificate in accordance with this action. 37 CFR 1.550(d). EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c). If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892.	3. <input type="checkbox"/> Interview Summary, PTO-474.
2. <input type="checkbox"/> Information Disclosure Statement, PTO-1449.	4. <input checked="" type="checkbox"/> See Continuation Sheet.

Part II SUMMARY OF ACTION

1a. ☒ Claims 1-64 are subject to reexamination.

1b. ☐ Claims _____ are not subject to reexamination.

☐ Claims _____ have been canceled in the present reexamination proceeding.

☐ Claims _____ are patentable and/or confirmed.

☒ Claims 1-64 are rejected.

☐ Claims _____ are objected to.

☐ The drawings, filed on _____ are acceptable.

7. ☐ The proposed drawing correction, filed on _____ has been (7a) ☐ approved (7b) ☐ disapproved.

☐ Acknowledgment is made of the priority claim under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of the certified copies have

1 ☐ been received.

2 ☐ not been received.

3 ☐ been filed in Application No. _____.

4 ☐ been filed in reexamination Control No. _____.

5 ☐ been received by the International Bureau in PCT application No. _____.

* See the attached detailed Office action for a list of the certified copies not received.

9. ☐ Since the proceeding appears to be in condition for issuance of an *ex parte* reexamination certificate except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte* Quayle, 1935 C.D. 11, 453 O.G. 213.

10 ☐ Other: _____

cc: Requester (if third party requester)

DETAILED ACTION

Introduction

The prosecution of Reexamination No. 90/005,601 originated with the filing of a Reexamination Request on December 30, 1999. The Request indicated that the requester considered claims 1-3, 14, 16, 22, 27, 30, 33, 38, 41-48, 55, 57, 60, and 63, of Eggers, et al., U.S. Patent Number 5,697,536, referenced hereafter as Eggers '536, as being anticipated by Roos, U.S. Patent Number 4,116,198, referenced hereafter as Roos '198. After a complete review of the merits of the Request, the examiner of record concluded that Roos '198 raised a substantial question of patentability. Consequently, an order granting the Request for Reexamination was mailed on February 2, 2000. The order was mailed for a second time on October 27, 2000.

The arguments presented by the Request concerning Roos '198 were addressed in a final decision by the examiner of record and reviewed by a board of primary examiners that convened to analyze the decision and make a final determination. However, before the mailing of the written decision, a new Information Disclosure Statement (IDS) was timely received on June 19, 2002. The IDS comprises of evidentiary documents pertinent to pending litigation at the United States District Court in the State of Delaware (Arthrocare Suit-Delaware, USDC-D. DEL.-C.A. No. 01-504-SLR).

In view of the new documents submitted by the IDS, the examiner of record has decided to divide this prosecution in two sections. The first section addresses the issues originally presented by the Request concerning Roos '198 and summarizes the patentability conclusion as it was decided by the examiner of record prior to the receipt of the new IDS. Finally, the second section addresses new relevant references as listed in the IDS received on June 19, 2002, and more specifically, the Supplemental Invalidation Response included in the submitted IDS package.

Section I: Analysis of the Roos Patent

After careful consideration and review of Roos '198, it is hereby found that Roos '198 does not anticipate or render obvious any of the independent claims of record for a variety of reasons that will be discussed below.

Interpretation of the Preamble

The preamble of claim 1, discloses "an electrosurgical system for use with a high frequency power supply and an electrically conducting fluid supply". It is noted that whether a preamble constitutes a limitation to a claim is a matter to be determined by the facts of each case in view of the claimed invention as a whole. See, In re Stencel, 828 F.2d 751, 4 USPQ2d 1071, 1073 (Fed. Cir. 1987). Additionally, the preamble of a claim does not limit the scope of the claim when it merely states intended use of the invention. In re Pearson, 494 F.2d 1399, 1403, 181 USPQ 641, 644 (CCPA 1974). However, terms in a preamble are construed as limitations when they give life and

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meaning to the invention claimed. Gerber Garment Technology, Inc. v. Lectra Syst., Inc., 916 F.2d 683, 688, 16 USPQ2d 1436, 1441 (Fed. Cir. 1990) (quoting) Perkins-Elmer Corp. v. Computervision Corp., 732 F.2d 888, 896, 221 USPQ 669, 675 (Fed. Cir.), cert. Denied, 469 U.S. 857 (1984). Although no "litmus test" exists as to what effect should be accorded to terms appearing in a preamble, a patent application in its entirety should be reviewed to determine whether the inventors intended such language to represent additional limitations or mere introductory language. See, e.g., in re Paulsen, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1673-74 (Fed. Cir. 1994) (Citing Corning Glass Works v. Suitomo Elect. U.S.A., Inc., 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed Cir. 1989).

Accordingly, a review of the specification in Eggers '536, reveals in column 4, lines 63-67, that figure 1 is a perspective view of the electro surgical probe, an electrically conducting liquid supply and an electro surgical power supply. Electrically conducting liquid (50) is shown in figure 1, within an IV bag and in fluid communication with the electro surgical probe (10) as shown in figures 2A and 2B. Moreover, in column 12, lines 26-28, the specification states that electrically conducting liquid (50) (e.g., isotonic saline) is caused to flow along the fluid paths (83).

In view of the foregoing, the phrase "an electrically conducting fluid supply" in the preamble of claim 1, must be interpreted in view of the specification as a limitation disclosing a medical container (e.g., IV bag) that stores electrically conducting liquid

(50) such as isotonic saline. The medical container is in fluid communication with the probe (10) allowing the electrically conducting liquid to make contact with the electrodes at the distal end of the probe (10). Additionally, in the last portion of claim 1, the phrase "the fluid path having an inlet adapted to be fluidly coupled to the electrically conductive fluid supply" unequivocally suggests that the drafter intended the preamble phrase "an electrically conducting fluid supply" to be a structural limitation. Clearly, the phrase "an electrically conducting fluid supply" gives life and meaning to the invention claimed, and therefore, must be considered in the assessment of patentability of claim 1.

Assessment of Patentability

The Roos '198 Patent never describes the use of "electrically conductive fluid" during electrosurgery. The Roos '198 Patent only discloses the use of an unspecified "washing liquid" that flows through the endoscope that houses the treatment and neutral electrodes. See Roos '198 Patent at 4:51-57, Fig. 1. The Roos '198 Patent does not state that the "washing liquid" that is supplied to the region of the surgical site is electrically conductive fluid. This omission is significant, because numerous non-conductive washing liquids, such as distilled water, glycine, sorbitol, and the like, have been used in electrosurgery and are still in use today. See, e.g., U.S. Patent No. 4,936,301 to Rexroth, et al. at 1:62-64 and 2:4-7.

In fact, the Roos '198 specification makes clear that the "washing liquid" delivered to the surgical site in the Roos '198 Patent is not electrically conductive. The

Roos '198 Patent states at column 6, lines 51-53 that "the neutral electrode 11 in the form of a steel band rests on the tissue in large area form, so that good electrical contact is ensured." If the "washing liquid" was electrically conductive, there would be no need for the neutral electrode to rest on the tissue in large area form to ensure good electrical contact. Electrical contact between the neutral electrode and the cutting electrode would be ensured by the "washing liquid" itself. The statement in the Roos '198 Patent that tissue contact with the neutral electrode is needed to ensure electrical contact plainly shows that the "washing liquid" described in the Roos '198 Patent could not have been electrically conductive.

A later-issued patent to the same named inventor, U.S. Patent No. 4,706,667, referenced hereafter as Roos '667, demonstrates unequivocally that the "washing liquid" disclosed in the Roos '198 Patent was not electrically conductive. The Roos '198 Patent claims priority to German Patent Application No. 2521719, referenced hereafter as "German Patent Application". The Roos '667 Patent explains at column 1 lines 14-29 that the device described in the German Patent Application (and thus in the Roos '198 Patent) did not work to cut tissue because the medium in contact with the electrodes was not electrically conductive:

"In a known electro-surgical high frequency cutting instrument of this kind (DE-OS No. 25 21 719) the neutral electrode is admittedly arranged in the immediate vicinity of the cutting electrode, it is however so separated from the tissue by a plastic cover, or

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by its arrangement in an endoscope, that it can only enter into electrical contact with the cutting electrode electrolytically via the secretion which is present during the cutting process. As a result, it is difficult to maintain the current intensity required for trouble free cutting in a required precisely defined manner at the cutting electrode. Thus, if the power setting at the r.f. generator is too high, burns can result or, if the power setting is too low, then a poor cut or indeed injury occurs because the tissue to be cut sticks to the cutting electrode as a result of coagulation processes".

According to the Roos '667 Patent, the device disclosed in the parent application to the Roos '198 Patent (and thus in the Roos '198 Patent itself) did not work because there was insufficient electrical contact between the neutral and cutting electrodes to cut tissue, even though the electrodes were in the "immediate vicinity" of one another. If the Roos '198 Patent had delivered electrically conducting fluid to the tissue site, such as isotonic saline, then the Roos '667 Patent surely would not have stated, as it did, that the cutting and neutral electrodes "only enter into electrical contact" with each other "via the secretion which is present during the cutting process." If Roos '198 had delivered electrically conducting fluid to the tissue site, there would have been an electrical connection between the cutting and neutral electrodes by virtue of the electrically conducting fluid itself, regardless of whether bodily secretions were present. Plainly, Roos '198 used non-conducting "washing liquid" and attempted to rely on bodily secretions from the cutting process to make the non-conductive "washing liquid" more

conductive. According to the Roos '667 Patent, these secretions did not make the non-conductive "washing liquid" electrically conductive.

Significantly, the Roos '667 Patent did not solve the electrical contact problem described in the Roos '198 Patent by introducing electrically conducting fluid to the tissue site. Rather, the Roos '667 Patent solved the problem of poor conductivity by disclosing a device in which both the cutting and neutral electrodes were in physical contact with the tissue so that current could flow from the cutting electrode, through the tissue, and to the return electrode, not through electrically conducting fluid. The Roos '667 Patent explains at column 4, line 30:

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"The instrument is first of all placed in accordance with FIG. 1 onto the tissue 16 which is to be separated by means of a cut, with a concave ring-like contact surface 14 being formed between the tissue 16 and the neutral electrode 11 and with a very small funnel-like contact surface 15 being formed between the tip of the cutting electrode 12 and the tissue 16. If the r.f. generator is now switched on then an r.f. current indicated by the current lines 28 flows between the cutting electrode 12 and the neutral electrode 11".

In conclusion, because the Roos '198 Patent does not disclose or enable electro-surgical ablation in the presence of electrically conductive fluid, it cannot anticipate claims 1, 45, and 63, containing such an element. PPG Indus., Inc. v.

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Guardian Indus. Corp., 75 F.3d 1558, 1566 (Fed. Cir. 1996) ("To anticipate a claim, a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter.").

Section II: References disclosed in the IDS dated June 19, 2002

Claim Rejections

In order to expedite the prosecution of this reexamination, the examiner of record will make direct references to the Supplemental Invalidity Response (Arthrocare Suit-Delaware, USDC-D. DEL.-C.A. No. 01-504-SLR) submitted with the IDS package dated June 19, 2002.

35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily

published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Malley, et al., reference no. 3. Please refer to page 2 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Curtiss, reference no. 9. Please refer to page 5 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Piercy, et al., reference no. 12. Please refer to page 6 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Dennis, et al., reference number 16. Please refer to page 8 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Barry, et al., reference number 21. Please refer to page 10 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Swain, et al., reference number 24. Please refer to page 12 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Malis, et al., reference number 28. Please refer to page 14 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Pao, reference number 36. Please refer to page 17 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Tucker, et al., reference number 37. Please refer to page 18 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee, et al., reference number 38. Please refer to page 18 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 90/03152, reference number 43. Please refer to page 21 of Supplemental Invalidity Response.

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Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Stasz, reference number 46. Please refer to page 22 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Reimels, reference number 52. Please refer to page 25 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Olsen, reference number 57. Please refer to page 28 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohtomo, et al., reference number 66. Please refer to page 32 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Rydwell, et al., reference number 67. Please refer to page 32 of Supplemental Invalidity Response.

Claims 1-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamerling, reference number 70. Please refer to page 34 of Supplemental Invalidity Response.

Claim Rejections - 35 USC § 103

On page 8 of the Supplemental Invalidity Response, it is alleged that claim 45 of Eggers '536 would have been obvious to one of ordinary skill in the art at the time of the invention in view of at least each of the following combinations. Please refer to the table on pages 1-8 of the Supplemental Invalidity Response to identify the patent/publication number, inventor/author, and title.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one or more of references 1, 4, 5, 6, 7, 10, 11, 13, 17, 30, 33, 40, 44, 50, 55, 56, 60, 61,

Art Unit: 3763

69, 71, 72, 73 in view of any one or more of references 3, 9, 12, 16, 21, 24, 28, 36, 37, 38, 43, 46, 52, 57, 66, 67, 70. According to the allegations of unpatentability disclosed on page 8 of the Supplemental Invalidity Response, it would have been obvious to modify any one or more of references 1, 4, 5, 6, 7, 10, 11, 13, 17, 30, 33, 40, 44, 50, 55, 56, 60, 61, 69, 71, 72, 73 with the enhancements taught by 3, 9, 12, 16, 21, 24, 28, 36, 37, 38, 43, 46, 52, 57, 66, 67, 70, because "each reference is directed to the same problem-Appling electrical energy to a target site on a patient's body structure". Accordingly, all modifications to the base references following the teachings of the secondary references listed above, are considered obvious design choices.

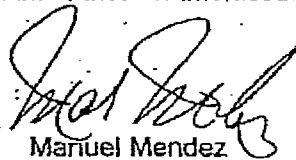
205577-10557700
Claims 1-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one or more of references 2, 34, and 47, in view of any one or more of references 3, 9, 12, 16, 21, 24, 28, 36, 37, 38, 43, 46, 52, 57, 66, 67, 70. According to the allegations of unpatentability disclosed on page 8 of the Supplemental Invalidity Response, it would have been obvious to modify any one or more of references 2, 34, and 47 with the enhancements taught in references 3, 9, 12, 16, 21, 24, 28, 36, 37, 38, 43, 46, 52, 57, 66, 67, 70, because "each reference is directed to the same problem-Appling electrical energy to a target site on a patient's body structure". Accordingly, all modifications to the base references following the teachings of the secondary references listed above, are considered obvious design choices.

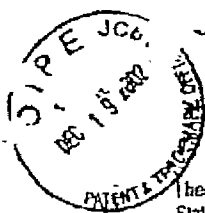
Claims 1-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over reference 59 in view of any one or more of references 3, 9, 12, 16, 21, 24, 28, 36, 37, 38, 43, 46, 52, 57, 66, 67, 70. According to the allegations of unpatentability disclosed on page 9 of the Supplemental Invalidity Response, it would have been obvious to modify reference 59 with the enhancements taught in references 3, 9, 12, 16, 21, 24, 28, 36, 37, 38, 43, 46, 52, 57, 66, 67, 70, because "each reference is directed to the same problem-Appling electrical energy to a target site on a patient's body structure". Accordingly, all modifications to the base references following teachings of the secondary references listed above are considered obvious design choices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manuel Mendez whose telephone number is 703-308-2221. The examiner can normally be reached on 0730-1800 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Brian Casler can be reached on 703-308-3552. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3590 for regular communications and 703-305-3590 for After Final communications.

September 24, 2002


Manuel Mendez
Primary Examiner
Art Unit 3763



12-23-02

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Reexam

I hereby certify that this correspondence is being deposited with the United States Postal Service Express Mail Post Office to Addressee service under 37 CFR 1.10 on the date indicated below, Express Mail No. EU627186305 and is addressed to Assistant Commissioner for Patents, Washington, D.C. 20231

PATENT
Attorney Docket No.: RE-EXAM - 1

TC 3763
CP2 2A01

On December 19, 2002
By Katie Zarzana
Katie Zarzana

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: EGGERS et al.
Reexamination of U.S. Patent No.: 5,697,536
Reexamination No.: 90/005,601
Reexamination Filed: December 30, 1999

Examiner: Manuel Mendez
Art Unit: 3763 ✓

Patent Filed: November 18, 1996
Patent Issued: December 16, 1997

WRITTEN STATEMENT PER 37
C.F.R. §1.560(b)

For: SYSTEM AND METHOD FOR
ELECTROSURGICAL CUTTING AND
ABLATION

RECEIVED
JAN 02 2003
TECHNOLOGY CENTER R3700

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

This statement is made pursuant to 37 C.F.R. §1.560(b). As per M.P.E.P. §2281, this Statement is timely filed.

Statement Regarding Communications between the Office and John Raffle

John Raffle, attorney for Patentee, discussed U.S. Patent No. 4,116,198 to Roos ("Roos") with Examiner Mendez. Examiner Mendez expressed his opinion that the Roos patent is not prior art and that he would set forth his opinion in writing. Mr. Raffle expressed Patentee's position that the Roos patent is not prior art. In addition, Mr. Raffle expressed the Patentee's view that the Roos patent does not disclose electrically conducting fluid. Mr. Raffle also discussed the existence of a later filed patent

application to Roos (that issued as the '667 patent) which pointed out that the device disclosed in the Roos patent did not work because it did not use an electrically conducting fluid. Mr. Raffle also understood that the Roos patent was known to Examiner Mendez through his examination of commonly assigned patent applications.

Mr. Raffle also discussed a memorandum decision filed by Judge Orrick on December 2, 1998 in a lawsuit in the United States District Court for the Northern District of California between ArthroCare Corp. (as plaintiff) and Ethicon, Inc., Mitek Surgical Products, Inc., and Gynecare, Inc., (collectively as defendants) ("*Ethicon* litigation"). Mr. Raffle generally explained that Patentee sought a preliminary injunction in the *Ethicon* litigation; what a preliminary injunction is; what the decision was; what the decision meant in terms of the case; and that Judge Orrick denied Patentee's motion for a preliminary injunction. Mr. Raffle also provided a copy of the memorandum decision to Examiner Mendez. Mr. Raffle also told Examiner Mendez that Judge Orrick made a preliminary finding based on Roos and explained the importance of the Roos patent in the *Ethicon* litigation. On or about January 31, 2001, Examiner Kashnikow telephoned Mr. Raffle and asked that he provide him with the order granting the request for reexamination of the '536 patent.

Statement Regarding Communications between the Office and Sanjay Bagade

In May 2002, Examiner Mendez contacted Sanjay Bagade, attorney for Patentee, regarding claim 1. Examiner Mendez indicated that the Office found the claims allowable over the Roos patent, but questioned whether the phrase "an electrosurgical system for use with a high frequency power supply and an electrically conducting fluid supply" should be moved from the preamble of claim 1 to the body of the claim. Mr. Bagade stated his opinion that such an amendment was not appropriate. At Examiner Mendez's suggestion, Examiner Mendez, Mr. Bagade, and Examiner Brian Casler conducted a telephone interview to discuss whether the claim required such an amendment. During the interview, Examiner Mendez, Examiner Casler, and Mr. Bagade primarily discussed various court decisions (as cited by Examiner Mendez in the Office Action.) At the conclusion of the interview, the parties agreed that an amendment to the

EGGERS et al.

Reexamination of U.S. Patent No.: 5,697,536

Reexamination No.: 90/005,601

Page 3

claim was not necessary for the limitation to be considered in the assessment of patentability of the claims.

Statement Regarding Various Communications between the Office and John

Raffle/Sanjay Bagade Regarding Status of the Reexamination

Both Mr. Raffle and Mr. Bagade have contacted either Examiner Mendez, Examiner Casler, or Examiner Kashnikov regarding various matters, including the status of the reexamination proceedings, various procedural matters regarding reexamination proceedings, and an estimation of when the Office would provide a first office action.

The reexamination proceeding was filed on December 30, 1999. As a result, the attorneys for the Patentee have made requests for the Office to issue an office action so that a timely response could be filed on the behalf of the Patentee. During these communications, either Mr. Raffle or Mr. Bagade have discussed various administrative issues such as the filing of information disclosure statements or the procedures for review of an office action in reexamination proceedings.

The attorneys for the Patentee wish to express their gratitude to the Examiners for their cooperation in providing information regarding the reexamination proceedings. The attorneys for Patentee respectfully request expedited review of this statement and accompanying response.

Respectfully submitted,



Sanjay S. Bagade
Reg. No. 42,280

ArthroCare Corporation
680 Vaqueros Ave.
Sunnyvale, CA 94085-3523
(408) 736-0224

I hereby certify that this correspondence is being deposited with the United States Postal Service Express Mail Post Office to Addressee service under 37 CFR 1.10 on the date indicated below, Express Mail Label No. EU627186305 and is addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231

PATENT

Attorney Docket No. 16238-000610



On December 19, 2002
By Kate Zarzana

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE TECHNOLOGY CENTER R3700

In re Patent of:

PHILIP E. EGGERS et al.

Application No. 90/005,601,

Reexamination of Patent No.: 5,697,536

Issued: December 16, 1997

For: SYSTEM AND METHOD FOR
ELECTROSURGICAL CUTTING AND
ABLATION

Examiner: M. Mendez

Art Unit: 3739

SUPPLEMENTAL INFORMATION
DISCLOSURE STATEMENT UNDER
37 CFR §1.97 and §1.98

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

The references cited on attached form PTO-1449 are being called to the attention of the Examiner. These references were brought to Applicant's attention through the *Smith & Nephew* litigation referred to in the previously submitted IDS. Also being submitted are the following documents:

- i) Correspondence from Kurtis MacFerrin to Perry Clark dated September 10, 2002 with Exhibit A (2 pgs), Exhibit B (11 pgs), Exhibit E (3 pgs).
- ii) Correspondence from Kurtis MacFerrin to Perry Clark dated October 9, 2002 with Exhibit A (2 pgs), Exhibit B (22 pgs), Exhibit E (7 pgs).
- iii) File History of U.S. Patent No. 4,116,198 Roos.

Philip E. Eggers et al.
Application No. 90/005,601
Reexamination of Patent No. 5,697,536
Page 2

If the Examiner believes a telephone conference would expedite prosecution of this re-examination, please call the undersigned at (408) 735-6323.

Respectfully submitted,



Sanjay S. Bagade
Reg. No. 42,280

ArthroCare Corporation
680 Vaqueros Ave.
Sunnyvale, CA 94085
(408) 736-0224

12-13-94 12:21 - 1055500113

FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)			Attorney Docket No. 16238-005610		Patent No.: 5,697,536	
			Applicant: PHILIP E. EGGERS et al.			
			Issue Date: December 16, 1997.		Group:	
Reference Designation U.S. PATENT DOCUMENTS						
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date
___ AA						
___ AB						
___ AC						
___ AD						
___ AE						
___ AF						
FOREIGN PATENT DOCUMENTS						
						Translation (yes/no)
___ AG						
___ AH						
___ AI						
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)						
___ AJ	Correspondence from C. Larson Dept. of Health & Human Services dated April 22, 1991 (3pgs)					
___ AK	Summary of Safety and Effective Information (2pgs)					
___ AL	Correspondence from R. Britain Dept. of Health & Human Services dated August 12, 1985					
___ AM	Correspondence from J. Malis Valley Forge dated July 25, 1985 (3pgs)					
___ AN	L. Malis J. Neurosurg. Vol. 85, pp. 970-975 (1996).					
___ AO	Excerpt from seminar by L. Malis, MD 1995 American Assoc. of Neurological Surgeons Meeting (1pg)					
___ AP	L. Malis The Value of Irrigation During Bipolar Coagulation (1pg)					
___ AQ	L. Malis New Trends in Microsurgery and Applied Technology (pgs 9-16)					
___ AR	Codman Bipolar Electrosurgery Products brochure (8 pgs)					
___ AS	The MALIS Bipolar Coagulating and Bipolar Cutting System CMC-II brochure (2pgs)					
___ AT	"Valley Forge's new products" Clinica Vol. 475, p. 5 (1991)					
___ AU	The MALIS Bipolar Electrosurgical Systems CMC-II (Catalog 80-1170) 34 pgs					
EXAMINER			DATE CONSIDERED			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ARTC 72573
HIGHLY CONFIDENTIAL
ATTORNEYS' EYES ONLY



CERTIFICATE OF SERVICE

I hereby certify that on this 19th day of December, 2002, a true and correct copy of the documents listed below were caused to be served on the attorneys of record at the following addresses as indicated:

1. Written Statement Per 37 CFR 1.560(b)
2. Response to First Office Action
3. Affidavit under 37 CFR 1.132
4. Supplemental Information Disclosure Statement, Form PTO-1449 and copies cited documents.

BY U.S. POSTAL SERVICE
FIRST CLASS MAIL

William C. Fuess
FUESS & DAVIDENAS
10951 Sorrento Valley Road, Suite II-G
San Diego, CA 92121-1613

RECEIVED
JAN 02 2003
TECHNOLOGY CENTER R3700

Executed on December 19, 2002 at Sunnyvale, California.


Katie Zarzana

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BY FAX AND MAIL

September 10, 2002

Perry Clark, Esquire
Weil, Gotshal & Manges LLP
201 Redwood Shores Parkway
Redwood Shores, CA 94065

Re: Arthrocare Suit - Delaware
USDC-D. Del. - C.A. No. 01-504-SLR

Dear Perry:

I have enclosed a revised set of invalidity claim charts that correct some errors we found in the charts served on ArthroCare on September 6, 2002, and a chart -- Exhibit E -- that was inadvertently not included previously.

Very truly yours,


Kurtis MacFerrin

cc: Jack B. Blumenfeld, Esq., Morris, Nichols, Arsh & Tunnell

50107269.doc

BOSTON
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DELAWARE
NEW YORK
SAN DIEGO
SILICON VALLEY
TWIN CITIES
WASHINGTON, DC

Exhibit A:

Prior art references upon which Smith & Nephew presently intends to primarily rely.

#	Issue/ Pub'n Date	Patent Number/ Publication	Inventor/Author	Title
8	00/00/76	Acta Medicotechnica (Medizinal- Markt), Vol. 24, No. 4, 1976 129 - 134	E. Elsasser and E. Roos	Über ein Instrument zur leckstromfreien transurethralen Resection (Concerning An Instrument for Transurethral resection without leakage of current)
10	07/20/76	US 3,970,088	Charles F. Morrison	Electrosurgical Devices Having Sesquipolar Electrode Structures Incorporated Therein
15	09/26/78	US 4,116,198 and its file history	Eberhard Roos	Electro-Surgical Device
22	04/27/82	US 4,326,529	James D. Doss and Richard L. Hutson	Corneal-Shaping Electrode
23	04/26/83	US 4,381,007	James D. Doss	Multipolar Corneal-Shaping Electrode with Flexible Removable Skirt
26	06/00/85	JACC Vol. 5, No. 6, 1382-6	Cornelis J. Slager, MSc, Catharina E. Essed, MD, Johan C.H. Schuurbiers, BSc, Nicolaas Bom, Ph.D, Patrick W. Serruys, MD, Geert T. Meester, MD, FACC	Vaporization of Atherosclerotic Plaques by Spark Erosion
29	00/00/87	Kardiologie, Kardiol. 76: Supp. 6, 67-71 (1987)	C.J. Slager, A.C. Phäff, C.E. Essed, J.C.H. Schuurbiers, N. Bom, V.A. Vandenbroucke, and P.W. Serruys	Spark Erosion of Arteriosclerotic Plaques
31	06/23/87	US 4,674,499	David S.C. Pao	Coaxial Bipolar Probe
32	07/00/88	Valleylab Part Number 945 100 102 A	Valleylab, Inc.	Surgistat Service Manual

#	Issue/ Pub'n Date	Patent Number/ Publication	Inventor/Author	Title
34	00/00/89	SPIE Vol. 1068 Catheter-based Sensing and Imaging Technology	Paul C. Nardella	Radio Frequency Energy and Impedance Feedback
36	02/21/89	US 4,805,616	David S.C. Pao	Bipolar Probes for Ophthalmic Surgery and Methods of Performing Anterior Capsulotomy
38	04/00/89	JACC Vol. 13 No. 5, 1167-75	Benjamin I. Lee, MD, FACC, Gary J. Becker, MD, Bruce F. Waller, MD, FACC, Kevin J. Barry, MS, Raymond J. Connolly, Ph.D, Jonathan Kaplan, MD, Alan R. Shapiro, MS, Paul C. Nardella, BS	Thermal Compression and Molding of Atherosclerotic Vascular Tissue With Use of Radiofrequency Energy: Implications for Radiofrequency Balloon Angioplasty
48	12/11/90	US 4,976,711	David J. Parins, Mark A. Rydell, Peter Stasz	Ablation Catheter With Selectively Deployable Electrodes
51	04/16/91	US 5,007,908	Mark A. Rydell	Electrosurgical Instrument Having Needle Cutting Electrode And Spot-Coag Electrode
52	04/23/91	US 5,009,656	Harry G. Reimels	Bipolar Electrosurgical Instrument

Exhibit B:

Examples of where each limitation of the dependent claims
of the '536 patent may be found in each reference.

claim text \ reference	1	2	3	4	5	6	7
46. An electrosurgical system as in claim 45, wherein the return electrode forms a portion of the shaft of the electrosurgical probe.	4:9-24						Fig. 2
47. An electrosurgical system as in claim 46 further including an insulating member circumscribing the return electrode.							3:58-61
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.							
55. The electrosurgical system of claim 45 wherein the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	1:40-55	206	8:10-9:8	3:10-28	58	2:54-57	2:67-3:16
56. The electrosurgical system of claim 45 wherein the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.						1:45-50	
58. The electrosurgical system of claim 45 wherein the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 Mhz.		206-07	3:49-4:14		58		
59. The electrosurgical system of claim 45 wherein the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).		211			58		

Exhibit B:

Examples of where each limitation of the dependent claims of the '536 patent may be found in each reference.

claim text \ reference	8	9	10	11	12	13	14
46. An electrosurgical system as in claim 45, wherein the return electrode forms a portion of the shaft of the electrosurgical probe.	7		4:31-43	2			
47. An electrosurgical system as in claim 46 further including an insulating member circumscribing the return electrode,			5:50-57	3			
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.							
55. The electrosurgical system of claim 45 wherein the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	7	7:58-68	4:44-64	3	530	6:45-54	
56. The electrosurgical system of claim 45 wherein the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.	11	0.0479167		2	527		
58. The electrosurgical system of claim 45 wherein the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 Mhz.		1:34-53					
59. The electrosurgical system of claim 45 wherein the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).		1:34-53					7:26-82

Exhibit B:
Examples of where each limitation of the dependent claims
of the '536 patent may be found in each reference.

claim text \ reference	15	16	17	18	19	20	21
46. An electrosurgical system as in claim 45, wherein the return electrode forms a portion of the shaft of the electrosurgical probe.	5:3-10				2:34-46	2:35-58	
47. An electrosurgical system as in claim 46 further including an insulating member circumscribing the return electrode.					2:34-46	2:35-58	
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.	3:5-20						
55. The electrosurgical system of claim 45 wherein the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	4:66-5:2	845	3:1-52	1:15-36	2:34-46	2:35-58	333
56. The electrosurgical system of claim 45 wherein the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.	1:18-27	845		2:21-63			334
58. The electrosurgical system of claim 45 wherein the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 Mhz.				8:30-39	6:61-68	2:35-58	333
59. The electrosurgical system of claim 45 wherein the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).				8:30-39	5:46-6:7	2:35-58	333

Exhibit B:
Examples of where each limitation of the dependent claims
of the '536 patent may be found in each reference.

claim text \ reference	22	23	24	25	26	27	28
46. An electrosurgical system as in claim 45, wherein the return electrode forms a portion of the shaft of the electrosurgical probe.		Fig. 1				3:30-47	
47. An electrosurgical system as in claim 46 further including an insulating member circumscribing the return electrode,		Fig. 1-2				3:30-47	
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.		2:42-68			1383		
55. The electrosurgical system of claim 45 wherein the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	2:41-43	Fig. 9; 3:29-30	1425	100	1383	1:26-50	1:57-2:6
56. The electrosurgical system of claim 45 wherein the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.			1426	100	1383	1:26-50	
58. The electrosurgical system of claim 45 wherein the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 MHz.	3:46-51	3:30-38	1425		1383		7:62-8:14
59. The electrosurgical system of claim 45 wherein the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).	3:46-51	3:30-38	1425		1383		

Exhibit B:
Examples of where each limitation of the dependent claims
of the '536 patent may be found in each reference.

claim text \ reference	29	30	31	32	33	34	35
46. An electrosurgical system as in claim 45, wherein							
the return electrode forms a portion of the shaft of the electrosurgical probe.	69		4:55-5:16				
47. An electrosurgical system as in claim 46 further including							
an insulating member circumscribing the return electrode,	69		4:55-5:16				
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.		Fig. 5	Fig. 4		Fig. 2	44	
55. The electrosurgical system of claim 45 wherein							
the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	68	5:11-27	5:17-31				
56. The electrosurgical system of claim 45 wherein							
the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.	68		9:37-47			42	
58. The electrosurgical system of claim 45 wherein							
the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 Mhz.	68				2:45-3:16	42	
59. The electrosurgical system of claim 45 wherein							
the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).	68			8	2:45-3:16		

Exhibit B:

Examples of where each limitation of the dependent claims
of the '536 patent may be found in each reference.

claim text \ reference	36	37	38	39	40	41	42
46. An electrosurgical system as in claim 45; wherein the return electrode forms a portion of the shaft of the electrosurgical probe;				Fig. 5; 8-9-34	4:16-28	292	275
47. An electrosurgical system as in claim 46 further including							
an insulating member circumscribing the return electrode,	4:4-39			Fig. 5; 8-9-34	4:36-43	292	275
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.							
55. The electrosurgical system of claim 45 wherein the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	4:40-58	662	1168	Fig. 5; 8-9-34	4:16-35	292	275
56. The electrosurgical system of claim 45 wherein the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.	2:16-34		1168	3:63-4:16	5:62-6:19	291	275
58. The electrosurgical system of claim 45 wherein the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 Mhz.			1168		2:62-65		
59. The electrosurgical system of claim 45 wherein the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).							

Exhibit B:
Examples of where each limitation of the dependent claims
of the '536 patent may be found in each reference.

claim text \ reference	43	44	45	46	47	48	49
46. An electrosurgical system as in claim 45, wherein							
the return electrode forms a portion of the shaft of the electrosurgical probe.				3:41-42	1:57-2:35	4:18-28	
47. An electrosurgical system as in claim 46 further including							
an insulating member circumscribing the return electrode,				3:41-42	1:57-2:35	4:18-28	
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.			inherent	6:42		6:28	
55. The electrosurgical system of claim 45 wherein							
the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	2:8-18	3:48-51	5:7-19	3:41-42	1:57-2:35	3:65-4:17	3:27-44
56. The electrosurgical system of claim 45 wherein							
the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.	1:1-4	3:6-25		3:8-34	1:18-39		1:47-68
58. The electrosurgical system of claim 45 wherein							
the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 Mhz.		3:36-41		6:5-30			
59. The electrosurgical system of claim 45 wherein							
the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).							

Exhibit B:

Examples of where each limitation of the dependent claims of the '536 patent may be found in each reference.

claim text \ reference	50	51	52	53	54	55	56
46. An electrosurgical system as in claim 45, wherein the return electrode forms a portion of the shaft of the electrosurgical probe.	3:17-23	3:35-57	2:63-3:5	3:37-64		2:62-68	1:61-2:11
47. An electrosurgical system as in claim 46 further including an insulating member circumscribing the return electrode.	3:17-23	3:35-57	1:42-50	3:37-64		2:62-68	
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.		3:53					
55. The electrosurgical system of claim 45 wherein the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	1:40-51	3:35-57	1:42-50	3:37-64	670		1:61-2:11
56. The electrosurgical system of claim 45 wherein the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.	2:2-20	1:9-12	1:5-9	1:9-15	669	1:52-55	1:50-58
58. The electrosurgical system of claim 45 wherein the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 Mhz.					669		
59. The electrosurgical system of claim 45 wherein the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).					672		

Exhibit B:
Examples of where each limitation of the dependent claims
of the '536 patent may be found in each reference.

claim text \ reference	57	58	59	60	61	62	63
46. An electrosurgical system as in claim 45, wherein							
the return electrode forms a portion of the shaft of the electrosurgical probe.		4:27-33		3:52-66		3:12-27	
47. An electrosurgical system as in claim 46 further including							
an insulating member circumscribing the return electrode,				3:52-66		3:12-27	
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.						Fig. 3	
55. The electrosurgical system of claim 45 wherein							
the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.				4:15-29	5:10-28	3:28-60	
56. The electrosurgical system of claim 45 wherein							
the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.	4:20-55	3:30-49	1:5-12			3:21-32	15:62-16:7
58. The electrosurgical system of claim 45 wherein							
the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 MHz.					4:28-48		
59. The electrosurgical system of claim 45 wherein							
the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).					4:28-48		3:21-32

Exhibit B:

Examples of where each limitation of the dependent claims
of the '536 patent may be found in each reference.

claim text \ reference	64	65	66	67	68	69	70
46. An electrosurgical system as in claim 45, wherein the return electrode forms a portion of the shaft of the electrosurgical probe.				4:37-52	4:33-43		2:37-46
47. An electrosurgical system as in claim 46 further including an insulating member circumscribing the return electrode,				4:37-52	4:33-43		2:58-66
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.							
55. The electrosurgical system of claim 45 wherein the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	5:44-63	5:20-36	1:63-2:17	4:37-52	4:33-43	3:13-16	2:37-46
56. The electrosurgical system of claim 45 wherein the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.				1:10-15			
58. The electrosurgical system of claim 45 wherein the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 Mhz.		6:25-40					
59. The electrosurgical system of claim 45 wherein the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).							

Exhibit B:

Examples of where each limitation of the dependent claims of the '536 patent may be found in each reference.

claim text \ reference	71	72	73
46. An electrosurgical system as in claim 45, wherein the return electrode forms a portion of the shaft of the electrosurgical probe.			5:36-58
47. An electrosurgical system as in claim 46 further including an insulating member circumscribing the return electrode.	5:36-58		
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.		2:29-36	
55. The electrosurgical system of claim 45 wherein the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	3:43-53	2:36-41	6:8-22
56. The electrosurgical system of claim 45 wherein the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.		2:63-68	3:26-34
58. The electrosurgical system of claim 45 wherein the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 Mhz.			
59. The electrosurgical system of claim 45 wherein the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).			6:23-33

Exhibit E:
Anticipation and obviousness contentions

Smith & Nephew contends that the following claims are anticipated by at least each of the following primary references. Smith & Nephew reserves the right to supplement this contention in the event ArthroCare changes its construction of the asserted claims, or in the event the Court's construction of the asserted claims differs.

Patent	Claim	References
536	46	8, 15, 23, 29, 31, 48, 51, 52
	47	23, 31, 48, 51
	55	8, 15, 22, 23, 26, 29, 31, 36, 38, 48, 51, 52, 65
	56	8, 15, 26, 29, 31, 36, 38, 51, 52
	58	22, 23, 26, 29, 38, 65
882	59	22, 23, 26, 29
	1	8, 15, 26, 38, 48, 51, 52, 65
	13	15, 26, 52, 65
	17	26
	18	26
	21	26, 52
	23	8, 26, 38, 48, 51, 52, 65
	24	8, 26, 38, 48, 51, 52, 65
	29	15, 26, 65
	47	26, 29, 38
	48	26, 29
	49	26, 29
	50	26, 29, 65
	54	48
592	3	8, 15, 23, 26, 31, 48, 51
	4	8, 15, 23, 26, 31, 48, 51
	9	8, 15, 23, 26, 31, 48, 51
	11	8, 23, 26, 31, 48, 51
	13	8, 15, 23, 26, 31, 48, 51
	18	8, 15, 26, 48, 51
	21	23, 26
	26	8, 15, 31, 48, 51
	27	8, 15, 31, 48, 51
	30	8, 15, 31, 48, 51
	32	8, 31, 48, 51
	34	8, 15, 31, 34, 48, 51
	39	8, 15, 48, 51
	42	

Smith & Nephew also contends that the following claims would have been obvious to one of ordinary skill in the art at the time of the invention in view of at least each of the following combinations of primary references, which Smith & Nephew contends would have been combined for at least the following reasons. Smith & Nephew reserves the right to supplement this contention in the event ArthroCare changes its construction of the asserted claims, or in the event the Court's construction of the asserted claims differs.

Patent	Claim	Combinations	Motivation to Combine
536	46	10 with any one or more of 22, 26, 36, 38, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	47	Any one or more of 8, 15, 26, 29, 36, 52 with any one or more of 10, 34; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	55	10 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	56	34 with any one or more of 48, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	58	Any one or more of 8, 15, 31, 48, 51, 52 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.

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Patent	Claim	Combinations	Motivation to Combine
	59	32 with any one or more of 8, 15, 31, 38, 48, 51, 52, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
882	1	10 with any one or more of 22, 23, 29, 31, 34, 36; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	13	Any one or more of 10, 29 with any one or more of 8, 38, 48, 51; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	17	Any one or more of 23, 29, 32 with any one or more of 8, 15, 38, 48, 51, 52, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	18	Any one or more of 23, 29, 32 with any one or more of 8, 15, 38, 48, 51, 52, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	21	Any one or more of 31, 36 with any one or more of 8, 15, 38, 48, 51, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	23	Any one or more of 22, 23, 29, 31, 36 with 15; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.

FISH & RICHARDSON P.C.

Frederick P. Fish
1855-1930

W.K. Richardson
1859-1931

BY FAX AND MAIL

October 9, 2002

Perry Clark, Esquire
Weil, Gotshal & Manges LLP
201 Redwood Shores Parkway
Redwood Shores, CA 94065

Re: Arthrocare Suit - Delaware
USDC-D. Del. - C.A. No. 01-504-SLR

Dear Perry:

I have enclosed a supplemental set of invalidity claim charts.

Very truly yours,



Kurtis MacFerrin

cc: Jack B. Blumenfeld, Esq., Morris, Nichols, Arsht & Tunnell (fax only)

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SILICON VALLEY
WASHINGTON, DC

Exhibit A:

Prior art references upon which Smith & Nephew presently intends to primarily rely.

#	Issue/ Pub'n Date	Patent Number/ Publication	Inventor/Author	Title
8	00/00/76	Acta Medicotechnica (Medizinal- Markt); Vol. 24, No. 4, 1976 129- 134	E. Elsasser and E. Roos	Über ein Instrument zur leckstromfreien transurethralen Resektion (Concerning An Instrument for Transurethral resection without leakage of current)
10	07/20/76	US 3,970,088	Charles F. Morrison	Electrosurgical Devices Having Sesquipolar Electrode Structures Incorporated Therein
15	09/26/78	US 4,116,198 and its file history	Eberhard Roos	Electro-Surgical Device
22	04/27/82	US 4,326,529	James D. Doss and Richard L. Hulson	Corneal-Shaping Electrode
23	04/26/83	US 4,381,007	James D. Doss	Multipolar Corneal-Shaping Electrode with Flexible Removable Skirt
26	06/00/85	IACC Vol. 5, No. 6, 1382-6	Cornelis J. Slager, MSc, Catharina E. Essed, MD, Johan C.H. Schuurbiens, BSc, Nicolaas Bom, Ph.D, Patrick W. Serruys, MD, Geert T. Meester, MD, FACC.	Vaporization of Atherosclerotic Plaques by Spark Erosion
29	00/00/87	Kardiologie, Kardiol. 76: Supp. 6, 67-71 (1987)	C.J. Slager, A.C. Phaff, C.E. Essed, J.C.H. Schuurbiens, N. Bom, V.A. Vandenbroucke, and P.W. Serruys	Spark Erosion of Arteriosclerotic Plaques
31	06/23/87	US 4,674,499	David S.C. Pao	Coaxial Bipolar Probe.
32	07/00/88	Valleylab Part Number 945 100 102 A	Valleylab, Inc.	Surgistat Service Manual

#	Issue/ Pub'n Date	Patent Number/ Publication	Inventor/Author	Title
34	00/00/89	SPIE Vol. 1068 Catheter-based Sensing and Imaging Technology	Paul C. Nardella	Radio Frequency Energy and Impedance Feedback
36	02/21/89	US 4,805,616	David S.C. Pao	Bipolar Probes for Ophthalmic Surgery and Methods of Performing Anterior Capsulotomy
38	04/00/89	JACC Vol. 13 No. 5, 1167-75	Benjamin I. Lee, MD, FACC, Gary J. Becker, MD, Bruce F. Waller, MD, FACC, Kevin J. Barry, MS, Raymond J. Connolly, Ph.D, Jonathan Kaplan, MD, Alan R. Shapiro, MS, Paul C. Nardella, BS	Thermal Compression and Molding of Atherosclerotic Vascular Tissue With Use of Radiofrequency Energy: Implications for Radiofrequency Balloon Angioplasty
48	12/11/90	US 4,976,711	David J. Parins, Mark A. Rydell, Peter Stasz	Ablation Catheter With Selectively Deployable Electrodes
51	04/16/91	US 5,007,908	Mark A. Rydell	Electrosurgical Instrument Having Needle Cutting Electrode And Spot-Coag Electrode
52	04/23/91	US 5,009,656	Harry G. Reimels	Bipolar Electrosurgical Instrument
74	1990		Jerry L. Malis, Valley Forge Scientific Corp.	CMC-III Bipolar System

50107285.doc

Exhibit B:
Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text \ reference	1	2	3	4	5	6	7
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:							
a high frequency power supply;	1:15-27	207	3:48-4:14	1:5-2:2	58-60	3:3-7	2:44-66
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	1:40-55, Fig. 1		8:10-9:8	1:5-2:2	58-60	3:3-7, Fig. 1, 2	4:4-19, 2:44-66
an electrode terminal disposed near the distal end, and	1:40-55, Fig. 1		8:10-9:8	1:5-2:2	58-60	3:3-7, Fig. 1, 2	4:4-19, 2:44-66
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	1:40-55, Fig. 1		8:10-9:8	1:5-2:2	58-60	3:3-7, Fig. 1, 2	4:4-19, 2:44-66
a return electrode electrically coupled to the electrosurgical power supply; and	1:15-27	207	3:48-4:14	1:5-2:2	58-60	3:3-7	2:44-66
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that			9:9-25				
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.			9:9-25				
46. An electrosurgical system as in claim 45, wherein							
the return electrode forms a portion of the shaft of the electrosurgical probe.	4:9-24						Fig. 2
47. An electrosurgical system as in claim 46 further including							
an insulating member circumscribing the return electrode,							3:58-61
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.							
55. The electrosurgical system of claim 45 wherein							

Exhibit B:

Examples of where each limitation of the claims of the '536 patent may be found in each reference.

claim text \ reference	1	2	3	4	5	6	7
the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	1:40-55	206	8:10-9:8	3:10-28	58	2:54-57	2:67-3:16
56. The electrosurgical system of claim 45 wherein the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.						1:45-50	
58. The electrosurgical system of claim 45 wherein the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 KHz and 20 Mhz.		206-07	3:49-4:14		58		
59. The electrosurgical system of claim 45 wherein the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).		211			58		

Exhibit B:
Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text \ reference	8	9	10	11	12	13	14
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:							
a high frequency power supply;	1	2:33-52	4:18-28	2	- 528	4:15; 7:38-50	
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	3, 7	2:40-63	4:18-28	2	530	6:55-70	
an electrode terminal disposed near the distal end, and	3, 7	2:40-63	4:18-28	2	530	6:55-70	
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	3, 7	2:40-63	4:18-28	2	530	6:55-70	
a return electrode electrically coupled to the electrosurgical power supply; and	1	2:33-52	4:18-28	2	528	4:15; 7:38-50	
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	4-5	2:40-63			529		
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	4-5	2:40-63			529		
46. An electrosurgical system as in claim 45, wherein the return electrode forms a portion of the shaft of the electrosurgical probe.	7		4:31-43	2			
47. An electrosurgical system as in claim 46 further including							
an insulating member circumscribing the return electrode,			5:50-57	3			
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.	1						
55. The electrosurgical system of claim 45 wherein							

Exhibit B:

Examples of where each limitation of the claims of the '536 patent may be found in each reference.

claim text \ reference	8	9	10	11	12	13	14
the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	7	7:58-68	4:44-64	3	530	6:45-54	
56. The electrosurgical system of claim 45 wherein							
the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.	11	0.0479167		2	527		
58. The electrosurgical system of claim 45 wherein							
the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 Mhz.		1:34-53					
59. The electrosurgical system of claim 45 wherein							
the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).		1:34-53					7:26-42

Exhibit B:

Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text \ reference	15	16	17	18	19	20	21
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:							
a high frequency power supply;	1:5-17	845-46	6:1-30	1:12-37	2:33-46	2:35-58	333
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	4:51-520	846	6:1-30	1:12-37	2:33-46	2:35-58	333
an electrode terminal disposed near the distal end, and	4:51-520	846	6:1-30	1:12-37	2:33-46	2:35-58	333
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	4:51-520	846	6:1-30	1:12-37	2:33-46	2:35-58	333
a return electrode electrically coupled to the electrosurgical power supply; and	1:5-17	845-46	6:1-30	1:12-37	2:33-46	2:35-58	333
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	1:52-56, 5:26-30, 7:59-62	846		3:67-4:3	1:34-38	2:35-58	334
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	1:52-56, 5:26-30, 7:59-62	846		3:67-4:3	1:34-38	2:35-58	334
46. An electrosurgical system as in claim 45, wherein							
the return electrode forms a portion of the shaft of the electrosurgical probe.	5:3-10				2:34-46	2:35-58	
47. An electrosurgical system as in claim 46 further including							
an insulating member circumscribing the return electrode,					2:34-46	2:35-58	
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.	3:5-20						
55. The electrosurgical system of claim 45 wherein							

Exhibit B:

Examples of where each limitation of the claims of the '536 patent may be found in each reference.

claim text \ reference	15	16	17	18	19	20	21
the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	4:66-5:2	845	3:1-52	1:15-36	2:34-46	2:35-58	333
56. The electrosurgical system of claim 45 wherein the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.	1:18-27	845		2:21-63			334
58. The electrosurgical system of claim 45 wherein the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 KHz and 20 MHz.				8:30-39	6:61-68	2:35-58	333
59. The electrosurgical system of claim 45 wherein the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).				8:30-39	5:46-6:7	2:35-58	333

Exhibit B:
Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text \ reference	22	23	24	25	26	27	28
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:							
a high frequency power supply;	2:21-58	2:42-68	1425	99	1383	2:38-66	2:23-33
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	2:21-58	2:42-68	1425	99	1383	2:35-66	2:23-33
an electrode terminal disposed near the distal end, and	2:21-58	2:42-68	1425	99	1383	2:35-66	2:23-33
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	2:21-58	2:42-68	1425	99	1383	2:35-66	2:23-33
a return electrode electrically coupled to the electrosurgical power supply; and	2:21-58	2:42-68	1425	99	1383	2:38-66	2:23-33
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	2:21-58	2:42-68	1425	99	1383	3:48-53	2:18, 5:28-31
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	2:21-58	2:42-68	1425	99	1383	3:48-53	2:18, 5:28-31
46. An electrosurgical system as in claim 45, wherein							
the return electrode forms a portion of the shaft of the electrosurgical probe.		Fig. 1				3:30-47	
47. An electrosurgical system as in claim 46 further including							
an insulating member circumscribing the return electrode,		Fig. 1-2				3:30-47	
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.		2:42-68			1383		
55. The electrosurgical system of claim 45 wherein							

Exhibit B:

Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text / reference	22	23	24	25	26	27	28
the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	2:41-43	Fig. 9; 3:29-30	1425	100	1383	1:26-50	1:57-2:6
56. The electrosurgical system of claim 45 wherein the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body			1426	100	1383	1:26-50	
58. The electrosurgical system of claim 45 wherein the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 KHz and 20 Mhz.	3:46-51	3:30-38	1425		1383		7:62-8:14
59. The electrosurgical system of claim 45 wherein the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).	3:46-51	3:30-38	1425		1383		

Exhibit B:
Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text \ reference	29	30	31	32	33	34	35
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:							
a high frequency power supply;	67-68	4:32-5:10	2:45-58		2:45-69	42	248
an electrosurgical probe comprising a shaft having a proximal end and a distal end;	67-68	4:32-5:10	2:45-58		2:45-69		248
an electrode terminal disposed near the distal end, and	67-68	4:32-5:10	2:45-58		2:45-69		248
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	67-68	4:32-5:10	2:45-58		2:45-69		248
a return electrode electrically coupled to the electrosurgical power supply; and	67-68	4:32-5:10	2:45-58		2:45-69	42	248
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	68		3:31, 7:65				248
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	68		3:31, 7:65				248
46. An electrosurgical system as in claim 45, wherein							
the return electrode forms a portion of the shaft of the electrosurgical probe.	69		4:55-5:16				
47. An electrosurgical system as in claim 46 further including							
an insulating member circumscribing the return electrode,	69		4:55-5:16				
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.		Fig. 5	Fig. 4		Fig. 2	44	
55. The electrosurgical system of claim 45 wherein							

Exhibit B:

Examples of where each limitation of the claims of the '536 patent may be found in each reference.

claim text \ reference	29	30	31	32	33	34	35
the electrode terminal comprises a single active electrode disposed near the distal end of the shaft	68	5:11-27	5:17-31				
56. The electrosurgical system of claim 45 wherein							
the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body	68		9:37-47			42	
58. The electrosurgical system of claim 45 wherein							
the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 Mhz	68				2:45-3:16	42	
59. The electrosurgical system of claim 45 wherein							
the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS)	68			8	2:45-3:16		

Exhibit B:
Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text \ reference	36	37	38	39	40	41	42
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:							
a high frequency power supply;	4:4-39	662-63	1168	5:1-47	2:62-65	291	275
an electrosurgical probe comprising a shaft having a proximal end and a distal end;	4:4-39	662-63	1169	5:1-47	2:19-22	292	275
an electrode terminal disposed near the distal end; and	4:4-39	662-63	1169	5:1-47	2:19-22	292	275
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	4:4-39	662-63	1169	5:1-47	2:19-22	292	275
a return electrode electrically coupled to the electrosurgical power supply; and	4:4-39	662-63	1168	5:1-47	2:62-65	291	275
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	7:30-32	663	1168			291	275
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	7:30-32	663	1168			291	275
46. An electrosurgical system as in claim 45, wherein the return electrode forms a portion of the shaft of the electrosurgical probe.				Fig. 5; 8:9-34	4:16-28	292	275
47. An electrosurgical system as in claim 46 further including							
an insulating member circumscribing the return electrode;	4:4-39			Fig. 5; 8:9-34	4:36-43	292	275
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.							
55. The electrosurgical system of claim 45 wherein							

Exhibit B:

Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text \ reference	36	37	38	39	40	41	42
the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	4:40-58	662	1168	Fig. 5; 8:9-34	4:16-35	292	275
56. The electrosurgical system of claim 45 wherein							
the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.	2:16-34		1168	3:63-4:16	5:62-6:19	291	275
58. The electrosurgical system of claim 45 wherein							
the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 KHz and 20 Mhz.			1168		2:62-65		
59. The electrosurgical system of claim 45 wherein							
the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).							

Exhibit B:

Examples of where each limitation of the claims of the '536 patent may be found in each reference.

claim text \ reference	43	44	45	46	47	48	49
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:							
a high frequency power supply;	2:8-4:10	2:26-51	4:21-5:6	2:31-53	1:34	2:28	1:55
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	8, 10	2:26-51	4:40	2:31-53		2:28	1:55
an electrode terminal disposed near the distal end, and	8, 10	2:26-51	4:40	2:31-53		2:28	1:55
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	8, 10	2:26-51	4:40	2:31-53		2:28	1:55
a return electrode electrically coupled to the electrosurgical power supply; and	2:8-4:10	2:26-51	4:21-5:6	2:31-53	1:34	2:28	1:55
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	11		3:48-55	6:42		6:28, 4:6	1:65
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	11		3:48-55	6:42		6:28, 4:6	1:65
46. An electrosurgical system as in claim 45, wherein							
the return electrode forms a portion of the shaft of the electrosurgical probe.				3:41-4:2	1:57-2:35	4:18-28	
47. An electrosurgical system as in claim 46 further including							
an insulating member circumscribing the return electrode;				3:41-4:2	1:57-2:35	4:18-28	
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.			inherent	6:42		6:28	
55. The electrosurgical system of claim 45 wherein							

Exhibit B:
Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text \ reference	43	44	45	46	47	48	49
the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	2:8-18	3:48-51	5:7-19	3:41-4:2	1:57-2:35	3:65-4:17	3:27-44
56. The electrosurgical system of claim 45 wherein the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.	1:1-4	3:6-25		3:8-34	1:18-39		1:47-68
58. The electrosurgical system of claim 45 wherein the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 KHz and 20 Mhz.		3:36-41		6:5-30			
59. The electrosurgical system of claim 45 wherein the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).							

Exhibit B:

Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text \ reference	50	51	52	53	54	55	56
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:							
a high frequency power supply;	2:21-63	2:41-3:58	3:1-32	2:28-55	670	2:7-46	1:61-2:12
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	2:21-63	2:41-3:58	3:1-32	2:28-55	669	2:7-46	1:61-2:12
an electrode terminal disposed near the distal end, and	2:21-63	2:41-3:58	3:1-32	2:28-55	669	2:7-46	1:61-2:12
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	2:21-63	2:41-3:58	3:1-32	2:28-55	669	2:7-46	1:61-2:12
a return electrode electrically coupled to the electrosurgical power supply; and	2:21-63	2:41-3:58	3:1-32	2:28-55	670	2:7-46	1:61-2:12
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that		3:53	2:26	3:63, 2:1	672		
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.		3:53	2:26	3:63, 2:1	672		
46. An electrosurgical system as in claim 45, wherein							
the return electrode forms a portion of the shaft of the electrosurgical probe.	3:17-23	3:35-57	2:63-3:5	3:37-64		2:62-68	1:61-2:11
47. An electrosurgical system as in claim 46 further including							
an insulating member circumscribing the return electrode,	3:17-23	3:35-57	1:42-50	3:37-64		2:62-68	
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.		3:53					
55. The electrosurgical system of claim 45 wherein							

Exhibit B:
Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text \ reference	50	51	52	53	54	55	56
the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	1:40-51	3:35-57	1:42-50	3:37-64	670		1:61-2:11
56. The electrosurgical system of claim 45 wherein the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.	2:2-20	1:9-12	1:5-9	1:9-15	669	1:52-55	1:50-58
58. The electrosurgical system of claim 45 wherein the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 Mhz.					669		
59. The electrosurgical system of claim 45 wherein the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).					672		

Exhibit B:

Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text \ reference	57	58	59	60	61	62	63
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:							
a high frequency power supply;	3	3:9-49		4:45	3:30	2:35	
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	3	3:9-49	3:5-36	3:35	3:30	2:20	
an electrode terminal disposed near the distal end, and	3	3:9-49	3:5-36	3:35	3:30	2:20	
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	3	3:9-49	3:5-36	3:35	3:30	2:20	
a return electrode electrically coupled to the electrosurgical power supply; and	3	3:9-49		4:45	3:30	2:35	
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	6						
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	6						
46. An electrosurgical system as in claim 45, wherein							
the return electrode forms a portion of the shaft of the electrosurgical probe.		4:27-33		3:52-66		3:12-27	
47. An electrosurgical system as in claim 46 further including							
an insulating member circumscribing the return electrode;				3:52-66		3:12-27	
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.						Fig. 3	
55. The electrosurgical system of claim 45 wherein							

Exhibit B:

Examples of where each limitation of the claims of the '536 patent may be found in each reference.

claim text \ reference	57	58	59	60	61	62	63
the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.				4:15-29	5:10-28	3:28-60	
56. The electrosurgical system of claim 45 wherein							
the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.	4:20-5:5	3:30-49	1:5-12			2:14-20	3:21-32
58. The electrosurgical system of claim 45 wherein							
the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 kHz and 20 Mhz.					4:28-48		
59. The electrosurgical system of claim 45 wherein							
the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).					4:28-48		3:21-32

Exhibit B:
Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text \ reference	64	65	66	67	68	69	70
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:							
a high frequency power supply;	2:5	5:34	2:1	2:35	3:25	3:20	2:38
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	4:25	5:34	3:14	2:35	3:25	3:20	2:38
an electrode terminal disposed near the distal end, and	4:25	5:34	3:14	2:35	3:25	3:20	2:38
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	4:25	5:34	3:14	2:35	3:25	3:20	2:38
a return electrode electrically coupled to the electrosurgical power supply; and	2:5	5:34	2:1	2:35	3:25	3:20	2:38
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that		2:10, 6:65	2:10	4:10			3:1
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.		2:10, 6:65	2:10	4:10			3:1
46. An electrosurgical system as in claim 45, wherein							
the return electrode forms a portion of the shaft of the electrosurgical probe.				4:37-52	4:33-43		2:37-46
47. An electrosurgical system as in claim 46 further including							
an insulating member circumscribing the return electrode,				4:37-52	4:33-43		2:58-66
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.							
55. The electrosurgical system of claim 45 wherein							

Exhibit B:

Examples of where each limitation of the claims of the '536 patent may be found in each reference.

claim text \ reference	64	65	66	67	68	69	70
the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	5:44-63	5:20-36	1:63-2:17	4:37-52	4:33-43	3:13-16	2:37-46
56. The electrosurgical system of claim 45 wherein							
the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.	15:62-16:7			1:10-15			
58. The electrosurgical system of claim 45 wherein							
the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 KHz and 20 Mhz.		6:25-40					
59. The electrosurgical system of claim 45 wherein							
the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).							

1-2
3-4
5-6
7-8

Exhibit B:

Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text \ reference	71	72	73	74
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:				
a high frequency power supply;	3:43-4:18	2:30	4:35	SN61173
an electrosurgical probe comprising a shaft having a proximal end and a distal end;	Figs. 1-6	2:30	4:35	SN61187
an electrode terminal disposed near the distal end, and	Figs. 1-6	2:30	4:35	SN61187
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Figs. 1-6	2:30	4:35	SN61187
a return electrode electrically coupled to the electrosurgical power supply; and	3:43-4:18	2:30	4:35	SN61173
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that				SN61187
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.				SN61187
46. An electrosurgical system as in claim 45, wherein				
the return electrode forms a portion of the shaft of the electrosurgical probe.			5:36-58	SN61186
47. An electrosurgical system as in claim 46 further including				
an insulating member circumscribing the return electrode;			5:36-58	SN61184
the return electrode being sufficiently spaced from the electrode terminal to minimize direct contact between the return electrode and the patient's tissue.		2:29-36		SN61173
55. The electrosurgical system of claim 45 wherein				

Exhibit B:

Examples of where each limitation of the claims
of the '536 patent may be found in each reference.

claim text \ reference	71	72	73	74
the electrode terminal comprises a single active electrode disposed near the distal end of the shaft.	3:43-53	2:36-41	6:8-22	SN61173
56. The electrosurgical system of claim 45 wherein the target site is selected from the group consisting essentially of the abdominal cavity, thoracic cavity, knee, shoulder, hip, hand, foot, elbow, mouth, spine, ear, nose, throat, epidermis and dermis of the patient's body.		2:63-68	3:26-34	SN61183
58. The electrosurgical system of claim 45 wherein the frequency of the voltage applied between the return electrode and the electrode terminal is in the range of about 20 KHz and 20 Mhz.				SN61173
59. The electrosurgical system of claim 45 wherein the voltage applied between the electrode terminal and the return electrode is in the range from 10 volts (RMS) to 1000 volts (RMS).			6:23-33	SN61173

Exhibit E:
Anticipation and obviousness contentions

Smith & Nephew contends that the following claims are anticipated by at least each of the following primary references. Smith & Nephew reserves the right to supplement this contention in the event ArthroCare changes its construction of the asserted claims, or in the event the Court's construction of the asserted claims differs.

Patent	Claim	References
536	45	8, 15, 22, 23, 26, 29, 31, 36, 38, 48, 51, 52, 74
	46	8, 15, 23, 29, 31, 48, 51, 52
	47	23, 31, 48, 51
	55	8, 15, 22, 23, 26, 29, 31, 36, 38, 48, 51, 52, 65
	56	8, 15, 26, 29, 31, 36, 38, 51, 52
	58	22, 23, 26, 29, 38, 65
	59	22, 23, 26, 29
882	1	8, 15, 26, 38, 48, 51, 52, 65
	13	15, 26, 52, 65
	17	26
	18	26
	21	26, 52
	23	8, 26, 38, 48, 51, 52, 65
	24	8, 26, 38, 48, 51, 52, 65
	28	8, 15, 26, 29, 74
	29	15, 26, 65
	47	26, 29, 38
	48	26, 29
	49	26, 29
	50	26, 29, 65
	54	48
592	1	8, 15, 23, 26, 31, 34, 48, 51, 74
	3	8, 15, 23, 26, 31, 48, 51
	4	8, 15, 23, 26, 31, 48, 51
	9	8, 15, 23, 26, 31, 48, 51
	11	8, 23, 26, 31, 48, 51
	13	8, 15, 23, 26, 31, 48, 51
	18	8, 15, 26, 48, 51
	21	23, 26
	23	8, 15, 23, 26, 31, 34, 48, 51, 74
	26	8, 15, 31, 48, 51
	27	8, 15, 31, 48, 51
	30	8, 15, 31, 48, 51

Patent	Claim	References
	32	8, 31, 48, 51
	34	8, 15, 31, 34, 48, 51
	39	8, 15, 48, 51
	42	23, 26, 74

Smith & Nephew also contends that the following claims would have been obvious to one of ordinary skill in the art at the time of the invention in view of at least each of the following combinations of primary references, which Smith & Nephew contends would have been combined for at least the following reasons. Smith & Nephew reserves the right to supplement this contention in the event ArthroCart changes its construction of the asserted claims, or in the event the Court's construction of the asserted claims differs.

Patent	Claim	Combinations	Motivation to Combine
536	45	Any one or more of 10, 32, 34 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	46	10 with any one or more of 22, 26, 36, 38, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	47	Any one or more of 8, 15, 26, 29, 36, 52 with any one or more of 10, 34; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	55	10 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.

90713503-124902

Patent	Claim	Combinations	Motivation to Combine
	56	34 with any one or more of 48, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	58	Any one or more of 8, 15, 31, 48, 51, 52 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	59	32 with any one or more of 8, 15, 31, 38, 48, 51, 52, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
882	1	10 with any one or more of 22, 23, 29, 31, 34, 36; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	13	Any one or more of 10, 29 with any one or more of 8, 38, 48, 51; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	17	Any one or more of 23, 29, 32 with any one or more of 8, 15, 38, 48, 51, 52, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	18	Any one or more of 23, 29, 32 with any one or more of 8, 15, 38, 48, 51, 52, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.

Patent	Claim	Combinations	Motivation to Combine
	21	Any one or more of 31, 36 with any one or more of 8, 15, 38, 48, 51, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	23	Any one or more of 22, 23, 29; 31, 36 with 15; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	24	Any one or more of 22, 23, 29, 36 with 15; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	28	Any one or more of 10, 22, 23, 31, 32, 34, 36, 38, 48, 51, 52 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	29	Any one or more of 10, 48, 52 with any one or more of 8, 29; any one or more of the preceding with any one or more of the anticipating references listed above; 38, 51 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	47	Any one or more of 22, 31, 36 with any one or more of 8, 15, 48, 51, 52, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.

Patent	Claim	Combinations	Motivation to Combine
	48	Any one or more of 23, 32 with any one or more of 8, 15, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	49	32 with any one or more of 8, 15, 65; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	50	Any one or more of 8, 15 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	54	31 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
592	1	Any one or more of 10, 22, 29, 32, 36, 38, 52 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	3	Any one or more of 22, 29, 36, 52 with 34; any one or more of the preceding with any one or more of the anticipating references listed above; 38, 65 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	4	Any one or more of 22, 29, 36, 38, 52, 65 with 34; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	9	Any one or more of 10, 22, 29, 36, 38, 52, 65 with 34; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.

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Patent	Claim	Combinations	Motivation to Combine
	11	Any one or more of 22, 29, 36, 38, 52, 65 with any one or more of 15, 34; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	13	Any one or more of 22, 29, 36, 52 with 34; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	18	Any one or more of 10, 38, 52, 65 with any one or more of 23, 31, 34; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	21	Any one or more of 29, 32 with any one or more of 8, 15, 31, 34, 48, 51; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	23	Any one or more of 10, 22, 29, 32, 36, 38, 52 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	26	Any one or more of 22, 23, 26, 29, 36, 52 with 34; any one or more of the preceding with any one or more of the anticipating references listed above; 38, 65 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.

Patent	Claim	Combinations	Motivation to Combine
	27	Any one or more of 22, 23, 26, 29, 36, 38, 52, 65 with 34; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	30	Any one or more of 10, 22, 23, 26, 29, 36, 38, 52, 65 with 34; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	32	Any one or more of 22, 23, 26, 29, 36, 38, 52, 65 with any one or more of 15, 34; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	34	Any one or more of 22, 23, 26, 29, 36, 52 with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	39	Any one or more of 10, 26, 38, 52, 65 with any one or more of 31, 34; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.
	42	Any one or more of 23, 26, 29, 32 with any one or more of 8, 15, 31, 34, 48, 51; any one or more of the preceding with any one or more of the anticipating references listed above.	Each reference is directed to the same problem -- applying electrical energy to a target site on a patient's body structure.

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UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: ASSISTANT COMMISSIONER FOR PATENTS

Washington, D.C. 20231

APPLICATION NO/ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
90/005,601	DECEMBER 30, 1999	5,697,536	16238-00610

ARTHROCARE CORPORATION
680 VAQUEROS AVENUE
SUNNYVALE, CA 94085-3523

EXAMINER

MENDEZ, M.

ART UNIT	PAPER
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3763

18

DATE MAILED: MARCH 14, 2003 AK

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

cc: William C. Fuess, 3rd party
attorney

**Notice of Intent to Issue
Ex Parte Reexamination Certificate**

Control No.

90/005,601

Patent Under Reexamination

Examiner

Manuel Mendez

Art Unit

3783

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

1. ☒ Prosecution on the merits is (or remains) closed in this ex parte reexamination proceeding. This proceeding is subject to reopening at the initiative of the Office or upon petition. Cf. 37 CFR 1.313(e). A Certificate will be issued in view of:

(a) ☒ Patent owner's communication(s) filed: 19 December 2002.

(b) ☐ Patent owner's late response filed: _____.

(c) ☐ Patent owner's failure to file an appropriate response to the Office action mailed: _____.

(d) ☐ Patent owner's failure to timely file an Appeal Brief (37 CFR 1.192).

(e) ☐ Other: _____.

Status of Ex Parte Reexamination:

(f) Change in the Specification: ☐ Yes, ☐ No

(g) Change in the Drawing: ☐ Yes, ☐ No

(h) Status of the Claim(s):

(1) Patent claim(s) confirmed: 1-84.

(2) Patent claim(s) amended (including dependent on amended claim(s)): _____.

(3) Patent claim(s) cancelled: _____.

(4) Newly presented claim(s) patentable: _____.

(5) Newly presented cancelled claims: _____.

2. ☒ Note the attached statement of reasons for patentability and/or confirmation. Any comments considered necessary by patent owner regarding reasons for patentability and/or confirmation must be submitted promptly to avoid processing delays. Such submission(s) should be labeled: "Comments On Statement of Reasons for Patentability and/or Confirmation."

3. ☐ Note attached NOTICE OF REFERENCES CITED (PTO-892).

4. ☒ Note attached LIST OF REFERENCES CITED (PTO-1449).

5. ☐ The drawing correction request filed on _____ is: ☐ approved ☐ disapproved.

6. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of the certified copies have

☐ been received.

☐ not been received.

☐ been filed in Application No. _____.

☐ been filed in reexamination Control No. _____.

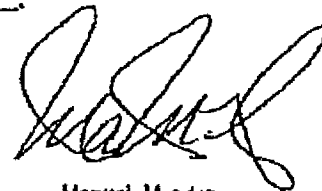
☐ been received by the International Bureau in PCT Application No. _____.

* Certified copies not received: _____.

7. ☐ Note attached Examiner's Amendment.

8. ☐ Note attached Interview Summary (PTO-474)

9. ☐ Other: _____.



Manuel Mendez
Primary Examiner
Art Unit 3783

cc: Requester (if third party requester)

U.S. Patent and Trademark Office
PTO-469 (Rev. 04-01)

Notice of Intent to Issue Ex Parte Reexamination Certificate

Part of Paper No 18

REEXAMINATION OF U.S. PATENT NUMBER 5,697,536


STATEMENT OF REASONS FOR PATENTABILITY AND/OR CONFIRMATION

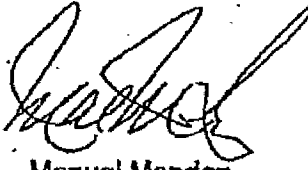
The following is an examiner's statement of reasons for patentability and/or confirmation of the claims found patentable in this reexamination proceeding:

The examiner of record concurs with the arguments presented by the patent owner on paper number 15. Accordingly, it is concluded that claims 1-64 are allowable over the prior art of record.

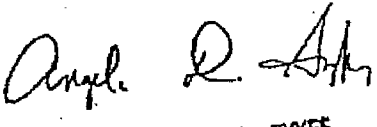
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manuel Mendez whose telephone number is 703-308-2221. The examiner can normally be reached on 0730-1800 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Brian Casler can be reached on 703-308-3552. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3590 for regular communications and 703-305-3590 for After Final communications.


BRIAN L. CASLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3763


Manuel Mendez
Primary Examiner
Art Unit 3763

March 4, 2003


ANGELA D. SYKES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700

FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Attorney Docket No. 16238-000610	Patent No.: 5,697,536			
		Applicant: PHILIP B. EGGERS et al.				
		Issue Date: December 16, 1997	Group:			
Reference Designation U.S. PATENT DOCUMENTS						
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date
AA						
AB						
AC						
AD						
AE						
AF						
FOREIGN PATENT DOCUMENTS						
						Translation (yes/no)
AG						
AH						
AI						
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)						
AJ	Correspondence from C. Larson Dept. of Health & Human Services dated April 22, 1991 (3pgs)					
AK	Summary of Safety and Effective Information (2pgs)					
AL	Correspondence from R. Britain Dept. of Health & Human Services dated August 12, 1985					
AM	Correspondence from J. Malis Valley Forge dated July 25, 1985 (3pgs)					
AN	L. Malis J. Neurosurg. Vol. 85, pp. 970-975 (1996).					
AO	Excerpt from seminar by L. Malis, MD 1995 American Assoc. of Neurological Surgeons Meeting (1pg)					
AP	L. Malis The Value of Irrigation During Bipolar Coagulation (1pg)					
AQ	L. Malis New Trends in Microsurgery and Applied Technology (pgs 9-16)					
AR	Codman Bipolar Electrosurgery Products brochure (8 pgs)					
AS	The MALIS Bipolar Coagulating and Bipolar Cutting System CMC-II brochure (2pgs)					
AT	"Valley Forge's new products" Clinica Vol. 475, p. 5 (1991)					
AU	The MALIS Bipolar Electrosurgical Systems CMC-II (Catalog 80-1170) 14 pgs					
EXAMINER		DATE CONSIDERED FEBRUARY 25, 2003				

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

TM 942284

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

February 19, 2003

THIS IS TO CERTIFY THAT ANNEXED IS A TRUE COPY FROM THE
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OF:

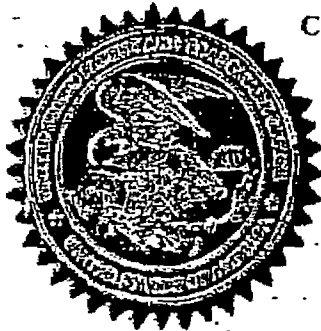
APPLICATION NUMBER: 08/561,958

FILING DATE: November 22, 1995

PATENT NUMBER: 5,697,882

ISSUE DATE: December 16, 1997

By Authority of the
COMMISSIONER OF PATENTS AND TRADEMARKS



M. K. Hawkins

M. K. HAWKINS

Certifying Officer



C-1

MAR. 25. 1997 8:32AM

NO. 072 8.5

I hereby certify that this correspondence is being
sent by facsimile transmission to: Examiner M. Mendez
Fax No.: 1-703-308-0750
Assistant Commissioner for Patents,
Washington, D.C. 20231,
or

March 28, 1997

TOWNSEND and TOWNSEND and CREW LLP

By Rhonda J. Stine
Rhonda J. Stine

Attorney Docket No. 16238-000700

PATENT

#7 Supp
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

PHILIP E. EGGERS et al.

Examiner: MENDEZ, M.

Application No.: 08/561,958

Art Unit: 3306

Filed: November 22, 1995

For: SYSTEM AND METHOD FOR
ELECTROSURGICAL CUTTING AND
ABLATION

SUPPLEMENTAL
AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Before action on the merits, please amend the above
identified application as follows.

P 300 17 04/14/97 08561958 20-1430 030 204 130.00CH

IN THE SPECIFICATION:

On page 13, line 14, delete the word "using".

On page 18, line 27, delete "voltages" and insert --
voltage--.

On page 21, line 5, between "occurring" and "the
region.." insert --in--, so that it reads --occurring in the
region.--.

PHILIP E. EGGERS et al.
Application No.: 08/561,958
Page 2

PATENT

On page 22, line 36, delete "current" and insert -- currents--.

On page 23, line 12, delete the word "laser".

On page 32, line 31, insert --return-- before the word "electrode".

IN THE CLAIMS:

Please cancel claims 1-22, 29, 30, 33, 36-38, and 57.
Please amend claims 23-28, 31, 32, 34, 35, 39-56, 58 and 59 as follows. Please add claims 80-105. All claims have been set forth for convenience of reference.

Please cancel claims 1-22.

1 23. (Twice Amended) A method for applying energy to a
2 target site on a patient body structure comprising:
3 providing an [active] electrode terminal and a return
4 electrode electrically coupled to a high frequency voltage
5 source;
6 positioning the active electrode in close proximity to
7 the target site in the presence of an electrically conducting
8 terminal [liquid]; and
9 applying a high frequency voltage between the [active]
10 electrode terminal and the return electrode, the high frequency
11 voltage being sufficient to vaporize the fluid [liquid] in a thin
12 layer over at least a portion of the [active] electrode terminal
13 and to induce the discharge of energy to the target site in
14 contact with [from] the vapor layer.

1 24. (Twice Amended) The method of claim 23 wherein
2 the [active] electrode terminal comprises an electrode array
3 including a plurality of isolated electrode terminals.

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1 ¹³ 25. (Amended) The method of claim 23 wherein [the] at
2 least a portion of the energy induced [from the vapor layer] is
3 in the form of photons having a wavelength in the ultraviolet
4 spectrum.

1 ¹⁴ 26. (Amended) The method of claim 23 wherein at least
2 a portion of the energy [induced from the vapor layer] is in the
3 form of energetic electrons.

1 ³ 27. (Amended) The method of claim 24 wherein the
2 isolated electrode terminals each have a contact surface area in
3 the range of about 0.25 mm² to 50.0 mm² (below 15 mm²).

1 28. (As Filed) The method of claim 24 wherein the isolated
2 electrode terminals have circular contact surfaces with an area in the range
3 from 0.01 mm² to 1 mm².

Please cancel claims 29 and 30.

1 ⁵ 31. (Amended) The method of claim 24 wherein the
2 electrode terminals are spaced from each other a distance of
3 about 0.0005 to 2.0 (5 to 0.01) mm.

1 32. (As Filed) The method of claim 24 wherein the electrode
2 array is disposed over a distal tip of an electrosurgical probe.

Please cancel claim 33.

1 34. (As Filed) The method of claim 24 wherein the electrode
2 terminals comprise a material with a relatively low thermal conductivity.

1 35. (As Filed) The method of claim 34 wherein the electrode
2 materials comprise a material selected from the group consisting of titanium,
3 tungsten, platinum, aluminum and tantalum.

Please cancel claims 36-38.

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1 2	17 25. (Amended) The method of claim 23 wherein the high frequency voltage is at least <u>200</u> [300] volts peak to peak.
B4 1 2 3	18 26. (Amended) The method of claim 23 wherein the voltage is in the range from <u>500</u> [600] to 1400 volts peak to peak.
BB4 1 2 3	19 27. (Amended) (As Filed) The method of claim 23 wherein the [active] electrode <u>terminal</u> is positioned between 0.02 to 5 mm from the target site.
B5 1 2 3	20 28. (Amended) The method of claim 23 wherein the vapor layer has a thickness of about <u>0.02 to 2.0 mm</u> (10 to 400 microns).
B6 1 2 3 4 5	21 29. (Twice Amended) The method of claim 23 wherein the <u>distance between the most proximal portion of the [active] electrode terminal [surface] and the most distal portion of the return electrode is</u> [surface are spaced apart by a distance] in the range from <u>0.5</u> [1] to 10 mm.
[1 2	22 30. (As Filed) The method of claim 24 wherein the return electrode has a distal end positioned proximal to the electrode array.
B7 1 2 3 4 5	23 31. (Twice Amended) The method of claim 23 wherein the [active] electrode <u>terminal</u> [surface] and the return electrode <u>are of comparable size and comprise a bipolar array of isolated electrode terminals which both come in close proximity or in contact with the body structure.</u>
B8 1 2 3	24 32. (Amended) The method of claim 23 wherein the <u>liquid phase of the electrically conducting fluid</u> [liquid] has a conductivity greater than 2 mS/cm.
1 2 3	25 33. (Amended) The method of claim 23 wherein the <u>liquid phase of the electrically conductive fluid</u> [liquid] comprises isotonic saline.

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1 ~~28~~ ³⁴ 44. (Twice Amended) A method for applying energy to a
2 target site on a patient body structure comprising:
3 providing an [active] electrode terminal and a return
4 electrode electrically coupled to a high frequency voltage
5 source;
6 positioning the [active] electrode terminal in close
7 proximity to the target site in the presence of an electrically
8 conducting fluid [liquid]; and
9 applying a high frequency voltage between the [active]
10 electrode terminal and the return electrode, the high frequency
11 voltage being sufficient to impart sufficient energy into the
12 target site to ablate [several cell layers of] the body structure
13 without causing substantial tissue necrosis below the surface of
14 the body structure underlying the ablated body structure [beyond
15 the several cell layers].

1 ~~29~~ ³⁷ 45. (Amended) The method of claim ~~44~~ ²⁸ wherein the
2 applying step comprises:
3 vaporizing the electrically conducting fluid [liquid]
4 in a thin layer over at least a portion of the [active] electrode
5 terminal [surface]; and
6 inducing the discharge of photons to the target site in
7 contact with [from] the vapor layer.

1 ~~30~~ ³⁸ 50. (Amended) The method of claim ~~45~~ ²⁹ wherein the
2 applying step comprises:
3 vaporizing the electrically conducting fluid [liquid]
4 in a thin layer over at least a portion of the active electrode
5 surface; and
6 inducing the discharge of energetic electrons to the
7 target site in contact with [from] the vapor layer.

1 51. (As Filed) The method of claim 48 wherein the depth of
2 necrosis is 0 to 400 microns.

1 ~~26~~ ³⁹ 52. (Twice Amended) A method for applying energy to a
2 target site on a patient body structure comprising:

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3 providing an active electrode and a return electrode
4 electrically coupled to a high frequency voltage source;
5 positioning the [active] electrode terminal in close
6 proximity to the target site in the presence of an electrically
7 conducting fluid [liquid]; and
8 applying a high frequency voltage between the [active]
9 electrode terminal and the return electrode, the high frequency
10 voltage being in the range from 500 [600] to 1400 volts peak to
11 peak.

1 53. (As Filed) The method of claim 52 wherein the high
2 frequency voltage is in the range from 700 to 900 volts peak to peak.

1 32 ~~54~~ 54. (Twice Amended) A method for applying energy to a
2 target site on a patient body structure comprising:
3 providing an active electrode electrically coupled to a
4 high frequency voltage source;
5 positioning the [active] electrode terminal in close
6 proximity to the target site in the presence of an electrically
7 conducting fluid [liquid]; and
8 generating a voltage gradient between the [active]
9 electrode terminal and tissue at the target site, the voltage
10 gradient being sufficient to create an electric field that cause
11 the breakdown of [breaks down the] tissue through molecular
12 dissociation or disintegration.

1 33 ~~55~~ 55. (Twice Amended) The method of claim 54 wherein
2 the generating step comprises:
3 providing a return electrode electrically coupled to a
4 high frequency voltage source;
5 applying a high frequency voltage between the [active]
6 electrode terminal and the return electrode; and
7 vaporizing the electrically conducting fluid [liquid]
8 in a thin layer over at least a portion of the [active] electrode
9 terminal [surface].

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<p>1 2 3</p> <p>B¹³</p>	<p>34 56 58. (Amended) The method of claim 55 further comprising developing a film layer of vapor between the active electrode and the <u>body structure</u> [tissue] at the target site.</p>
<p>E</p>	<p>Please cancel claim 57. /</p>
<p>1 2 3 4 5</p> <p>B¹⁴</p>	<p>35 56 58. (Amended) The method of claim 55 further comprising cooling the tissue with the electrically conducting <u>fluid</u> [liquid] to <u>reduce the temperature rise of those portions of the body structure adjacent the target site</u> [shield the tissue from the high frequency voltage].</p>
<p>1 2 3 4 5 6</p> <p>B¹⁴</p>	<p>36 55 55. (Amended) The method of claim 58 wherein the cooling step includes translating the distal <u>surface</u> [tip] of the <u>electrode terminal</u> [probe] over the target site to allow the electrically conducting <u>fluid</u> [liquid] to contact the tissue after the tissue has been subjected to the <u>electric field</u> [high frequency voltage].</p>
<p>[</p>	<p>Please cancel claims 60-79, as they have been restricted out.</p> <p>Please add claims 80-105.</p>
<p>1 2 3 4 5</p> <p>B¹⁵</p>	<p>37 25 28. (New) The method of claim 23 wherein the electrode height of the most distal portion of the electrode terminal relative to the most proximal portion of the electrode terminal exposed to the electrically conducting fluid is in the range from 0.0 to 2.0 mm.</p>
<p>1 2 3 4 5 6</p> <p>B¹⁵</p>	<p>38 28 31. (New) The method of claims 23 and 28 wherein the electrode terminal is surrounded and supported by an insulating matrix at or near the distal tip of the probe to electrically isolate the proximal portion of the electrode terminal from the electrically conductive fluid, the insulating matrix comprising an inorganic material.</p>

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1 ³⁸ 37. (New) The method of claim ^{26 37} 37 wherein the
2 inorganic material is selected from the group consisting
3 essentially of ceramic, glass and glass/ceramic compositions.

1 ¹⁰ 38. (New) The method of claim ² 37 wherein the
2 electrode height of the most distal portion of any of the
3 electrode terminals relative to the most proximal portion of said
4 electrode terminals exposed to the electrically conducting fluid
5 is in the range from 0.0 to 2.0 mm.

1 ¹¹ 39. (New) The method of claim ²⁵ 38 wherein the
2 electrode terminals are surrounded and supported by an insulating
3 matrix at or near the distal tip of the probe to electrically
4 isolate proximal portions of the electrode terminals from the
5 electrically conductive fluid, the insulating matrix comprising
6 an inorganic material.

1 ¹² 40. (New) The method of claim ¹¹ 39 wherein the
2 inorganic material is selected from the group consisting
3 essentially of ceramic, glass and glass/ceramic compositions.

1 ³⁹ 41. (New) The method of claim ^{37 37} 40 wherein the distal
2 surface of the electrode terminal is recessed below the surface
3 of the insulating matrix by a distance from 0.01 mm to 1.0 mm.

1 ⁴⁰ 42. (New) The method of claim ^{41 37} 41 wherein the distal
2 surface of the electrode terminal is flush with the surface of
3 the insulating matrix.

1 ⁴¹ 43. (New) The method of claims ^{42 37 42} 42 and ⁴¹ 43 wherein the
2 electrode terminal comprises an electrode array including a
3 plurality of isolated electrode terminals.

1 ⁴² 44. (New) The method of claim ^{43 41} 43 wherein the
2 generating step comprises:
3 providing a return electrode electrically coupled to a
4 higher frequency voltage source;

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5 applying a high frequency voltage between the return
6 electrode and the array of electrode terminals; and
7 vaporizing the electrically conducting fluid in a thin
8 layer over one or more of the electrode terminals of the array.

1 ^{43 44} 90. (New) The method of claim ^{41 42} 89 further comprising
2 developing a film layer of vapor between one or more of the
3 electrode terminals and the target site.

1 ^{44 45 46} 91. (New) The method of claim ^{40 42} 89 further comprising
2 cooling the tissue with the electrically conducting fluid to
3 reduce the temperature rise of those portions of the body
4 structure adjacent the target site.

1 ¹⁵ 92. (New) The method of claim ¹⁴ 26 wherein the energy
2 of the energetic electrons is sufficient to cause disassociation
3 or disintegration of molecules of the body structure.

1 ¹⁶ 93. (New) The method of claim ¹⁴ 26 wherein the energy
2 evolved by the energetic electrons is greater than 3eV.

1 ^{45 46} 94. (New) The method of claims ^{1 43} 23 and ⁴³ 45 wherein the
2 density of the vapor layer is less than about 10^{20} atoms/cm³.

1 ^{46 47} 95. (New) The method of claims ^{1 30} 23 and ³⁰ 50 wherein the
2 electrode terminal is configured to promote bubble nucleation
3 causing the formation of the vapor layer.

1 ^{47 48} 96. (New) The method of claims ^{1 37} 23 and ³⁷ 48 wherein the
2 electrode terminal has a contact surface area in the range of
3 about 0.25 mm² to 50 mm².

1 ^{48 49} 97. (New) The method of claims ^{20 27 30 26} 48 and ^{30 26} 52 wherein the
2 high frequency voltage is at least 200 volts peak to peak.

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1 98. (New) The method of claims 45 and 52 wherein the
2 high frequency voltage is in the range from about 500 to 1400
3 volts peak to peak..

1 99. (New) The method of claims 48 and 52 wherein the
2 electrode terminal is positioned between 0.02 to 2.0 mm from the
3 target site.

1 100. (New) The method of claims 48 and 52 wherein the
2 electrode terminal and the return electrodes comprise a bipolar
3 array of isolated electrode terminals.

1 101. (New) The method of claims 23 and 48 further
2 comprising cooling the tissue with the electrically conducting
3 fluid to reduce the temperature rise of those portions of the
4 body structure adjacent the target site.

1 102. (New) The method of claim 101 wherein the cooling
2 step includes translating the distal surface of the active
3 electrode over the target site to allow the electrically
4 conducting fluid to contact the tissue after the tissue has been
5 subjected to the electric field.

1 103. (New) The method of claims 23 and 48 further
2 comprising evacuating fluid generated at the target site with a
3 suction lumen having a distal end adjacent the electrode
4 terminal.

1 104. (New) The method of claims 23 and 48 wherein the
2 target site is a tumor within or on the patient's body.

1 105. (New) The method of claims 48 and 52 wherein
2 the electrode terminal comprises an electrode array including a
3 plurality of isolated electrode terminals.--

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REMARKS

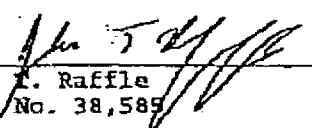
Claims 23-105 are pending.

Applicants have cancelled claims 1-22 and 29, 30, 33, 36-38 and 57, and prepared a few minor amendments to the remainder of the claims. In addition, dependent claims 80-105 have been added to further claim the features of the present invention. Applicants note that these features are fully described in the present invention and no new matter has been entered.

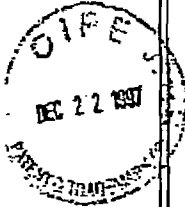
In view of the foregoing, Applicants believe all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (415) 326-2400.

Respectfully submitted,


John T. Raffle
Reg. No. 38,589

TOWNSEND and TOWNSEND and CREW LLP
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on Dec. 17, 1997.

By Vatubung

145-10 COFC

#18
FCS

PATENT

Attorney Docket No. 16238-000700

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPROVED
AS INDICATED

In re Patent of:

PHILIP E. EGGERS et al.

01/14/1998 EPHEX 000093 5,697,882
of FC145 100.00 DP

Issue Date: December 16, 1997

For: SYSTEM AND METHODS FOR
ELECTROSURGICAL CUTTING AND
ABLATION

FEB 12 1998
FOR THE COMMISSIONER OF
PATENTS & TRADEMARKS
REQUEST FOR
CERTIFICATE OF CORRECTION
UNDER 37 CFR \$1.323

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

Pursuant under 37 CFR \$1.323, Applicant submits a Certificate of Correction amending claim 23. These amendments to claim 23 have been made to correct typographical errors that were made in Applicant's Amendment filed on March 25, 1997. During that amendment, Applicant amended all of the claims to replace the term "liquid" with "fluid". In addition, Applicant amended all of the claims to replace the term "active electrode" with "electrode terminal".

In claim 23, however, Applicant mistakenly forgot to replace the term "active electrode" with "electrode terminal" on line 5. This term on line 5 derives antecedent basis from "an electrode terminal" on line 3 (also note the reference to electrode terminal on lines 7 and 9 of claim 23). Accordingly, in order to correct this error in antecedent basis, Applicant wishes to change "active electrode" on line 5 to "electrode terminal".

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Philip E. Eggers et al.
Page 2

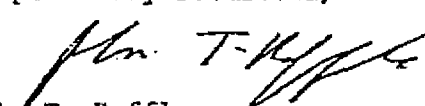
Similarly, on line 6 of claim 23, Applicant replaced "liquid" with "terminal" instead of replacing it with "fluid" as in the rest of claim 23, and the rest of the claims. In particular, note line 8 of claim 23 which refers to the fluid, clearly deriving antecedent basis from an earlier recitation of "fluid" in the claim. This antecedent basis must come from line 6. In addition, note dependent claims 46 and 47, which also refer to the electrically conductive fluid. These claims depend from claim 23. Finally, Applicant points out that the rest of the independent claims in this application (claims 48, 52 and 54) were amended to recite the step of "positioning the electrode terminal in close proximity to the target site in the presence of an electrically conducting [liquid] fluid".

Accordingly, it should clearly be seen that the above changes merely correct typographical errors made by the Applicant during prosecution of this case.

The desired corrections are set forth on form PTO 1050 enclosed herewith.

Enclosed is a check in the amount of \$100.00, pursuant to 37 CFR 51.20(a).

Respectfully submitted,


John T. Raffle
Reg. No. 38,585

ArthroCare Corporation
595 N. Pastoria Avenue
Sunnyvale, California 94086
(408) 736-0224

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 5,697,882
DATED : December 16, 1997
INVENTOR(S) : Philip E. Eggers et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS:

23. A method for applying energy to a target site on a patient body structure comprising:
providing an electrode terminal and a return electrode electrically coupled to a high frequency voltage source;
positioning the [active] electrode terminal in close proximity to the target site in the presence of an electrically conducting [terminal] fluid; and
applying a high frequency voltage between the electrode terminal and the return electrode, the high frequency voltage being sufficient to vaporize the fluid in a thin layer over at least a portion of the electrode terminal and to induce the discharge of energy to the target site in contact with the vapor layer.

Mailing address of sender:

John T. Raffle
ARTHROCARE CORPORATION
595 N. Pastoria Avenue
Sunnyvale, California 94086

Patent No. 5,697,882

No. of add'l. copies
@ 50¢ per page
→ 0

PTO Form 1050 (modified); Atty Docket No.: 16238-000700

NOTICE RE: CERTIFICATES OF CORRECTION

#16

DATE : 2-2-98

TO : Supervisor, Art Unit Mendez 3308

SUBJECT: Certificate of Correction Request in Patent No. 5697882

A response to the following question(s) is requested with respect to the accompanying request for a certificate of correction.

- ☒ 1. Would the change(s) requested under 37 CFR 1.323 constitute new matter or require reexamination of the application?
- ☒ 2. Would the change(s) requested under 37 CFR 1.323 materially affect the scope or meaning of the claims allowed by the examiner in the patent?
- ☐ 3. Applicant disagrees with change(s) initiated and dated by Examiner in lieu of an Examiner's Amendment. Should the change request be granted?
- ☐ 4. With respect to the change(s) requested, correcting Office errors, should the patent read as shown in the certificate of correction?
- ☐ 5. If the amendment filed _____ had been considered by the Examiner, would the amendment have been entered?

PLEASE RESPOND WITHIN 7 DAYS AND RETURN THE FILE TO Room 912, PK III

Franklin Fisher

Legal Instruments Examiner

RUSH

TO: CERTIFICATE OF CORRECTION BRANCH

DATE:

The decision regarding the change(s) requested in the certificate of correction is shown below.

- | | | |
|---------------------------------|----------------------------------------|-----------------------------------------|
| <input type="checkbox"/> 1. YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> Comments below |
| <input type="checkbox"/> 2. YES | <input checked="" type="checkbox"/> NO | <input type="checkbox"/> Comments below |
| <input type="checkbox"/> 3. YES | <input type="checkbox"/> NO | <input type="checkbox"/> Comments below |
| <input type="checkbox"/> 4. YES | <input type="checkbox"/> NO | <input type="checkbox"/> Comments below |
| <input type="checkbox"/> 5. YES | <input type="checkbox"/> NO | <input type="checkbox"/> Comments below |

☐ Comments NO COMMENTS NECESSARY

Supervisor

2/7/98

Art Unit

3306

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 5,697,882
DATED : December 16, 1997
INVENTOR(S) : Philip E. Eggers, et. al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS:

23. A method for applying energy to a target site on a patient body structure comprising:
providing an electrode terminal and a return electrode electrically coupled to a high frequency voltage source;
positioning the [active] electrode terminal in close proximity to the target site in the presence of an electrically conducting [terminal] fluid; and
applying a high frequency voltage between the electrode terminal and the return electrode, the high frequency voltage being sufficient to vaporize the fluid in a thin layer over at least a portion of the electrode terminal and to induce the discharge of energy to the target site in contact with the vapor layer.



Signed and Sealed this
Seventh Day of April, 1998

Attest:

Mary J. Davis
Acting Officer

Bruce Lehman

BRUCE LEHMAN

Commissioner of Patents and Trademarks

CERTIFICATE OF SERVICE

I, the undersigned, hereby certify that copies of the foregoing were caused to be served this 9th day of July, 2003, upon the following in the manner indicated:

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Karen Jacobs Loudon

CERTIFICATE OF SERVICE

I, the undersigned, hereby certify that copies of the foregoing were caused to be served this 11th day of July, 2003, upon the following in the manner indicated:

BY HAND

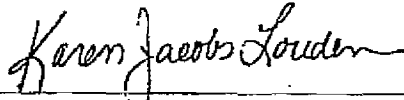
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Karen Jacobs Loudon



Jul 11 3 53 PM '00

OFFICE OF THE
DISTRICT ATTORNEY
JUL 11 3 53 PM '00

Third, there is no evidence that Messrs. Raffle or Bagade – or anyone at ArthroCare – had, or were even aware of the contents of, Smith & Nephew’s summary judgment motions or Dr. Taylor’s report. Indeed, because Smith & Nephew designated its summary judgment briefs and expert reports as “highly confidential” under the Protective Order (*e.g.*, D.I. 262-68, 302), they could not be disclosed to any ArthroCare employees.¹⁹ Absent evidence that Mr. Raffle or Mr. Bagade knew of the allegedly withheld information, there can be no finding of inequitable conduct. *See FMC Corp.*, 835 F.2d at 1415 (“Applicant must be chargeable with knowledge of the existence of the prior art or information, for it is impossible to disclose the unknown.”); *Nordberg, Inc. v. Telsmith, Inc.*, 82 F.3d 394, 397-98 (Fed. Cir. 1996) (stating that while a company might possess information, there can be no culpable intent in withholding information that those under a duty of disclosure did not know).²⁰

2. Failure to disclose the immaterial Roos declaration is not inequitable conduct.

Smith & Nephew also argues that “ArthroCare” committed inequitable conduct during the ‘536 reexamination by failing to disclose the Roos Declaration – another document not in the record. (D.I. 442 at 3, 21.) That argument also fails.

First, the Roos Declaration – a litigation-induced attempt to add “electrically conductive fluid” to the Roos ‘198 patent – is immaterial as a matter of law. This is because an inventor cannot add to the disclosure in a patent through *post hoc* declarations. *See Lear Siegler, Inc. v.*

¹⁹ In fact, the Marsden Declaration filed in support of Smith & Nephew’s brief (D.I. 443) was also filed under seal. The only document attached to that declaration that is marked confidential is Dr. Taylor’s expert report.

²⁰ Smith & Nephew argues that the fact that the briefs and report were marked “highly confidential” is not an excuse for failing to submit them to the Patent Office. (D.I. 442 at 24-26.) That argument, however, misses the point – Messrs. Raffle and Bagade could not disclose that which they did not possess and Smith & Nephew offered no evidence at trial that these attorneys possessed these documents.

Raffle was trying to broaden claim 1 so that ArthroCare could sue Ethicon (D.I. 442 at 36) is unsupported by any evidence in the record. If the corrections to claim 1 had been motivated by impending litigation, Mr. Raffle surely would have corrected application claim 52 in the same manner Smith & Nephew alleges “broadened” claim 1. He did not.

Smith & Nephew’s second allegation with respect to the ‘882 patent is that Mr. Raffle committed inequitable conduct by contending that there was no antecedent basis in application claim 23, but failing to point out that there was also an improper antecedent basis in application claim 52 that supposedly was “acceptable” to ArthroCare. (D.I. 442 at 31-32.) There is simply no evidence (much less clear and convincing evidence) that the antecedent basis issue in application claim 52 – which the examiner could see for himself – was acceptable to ArthroCare, nor is there any evidence that Mr. Raffle’s failure to correct application claim 52 was anything other than an honest mistake. That mistake does not establish intent to deceive. Indeed, the suggestion that Mr. Raffle consciously accepted the error in claim 52 is inconsistent with Smith & Nephew’s theory that Mr. Raffle was motivated to craft claims that would read on Ethicon’s products. Under this theory, if Mr. Raffle were aware of the “three electrode” problem in claim 52, he surely would have corrected it to cover Ethicon’s “two electrode” products.

Smith & Nephew’s final allegation with respect to the ‘882 patent is that Mr. Raffle committed inequitable conduct by failing to explain that the Certificate of Correction would broaden the scope of the claim. (D.I. 442 at 32-35.) This argument also fails. Because – as the jury found – Mr. Raffle’s errors were clerical or typographical, whether the Certificate of Correction broadened the scope of the claims is irrelevant. *See Superior Fireplace Co. v. Majestic Prods. Co.*, 270 F.3d 1358, 1370 (Fed. Cir. 2002) (“[W]e interpret [35 U.S.C.] § 255 to allow broadening corrections of clerical or typographical mistakes.”). In addition, the Certificate

misrepresentation about the significance of the Roos '198 patent to the '592 patent makes it less likely that the '882 and '536 patents will be subject to reexamination, and has the potential to taint the reexamination of the '882 and '536 patents. (D.I. 442 at 38.) First, the '882 and '536 patents issued years before ArthroCare knew of the Roos '198 patent. *See Dayco*, 329 F.3d at 1366 n.4 (no inequitable conduct where patent issued before patentee was aware of undisclosed prior art). Second, there is no evidence that the Roos '198 patent is even relevant to the '592 and '882 patents – Smith & Nephew did not assert the Roos '198 patent against the '592 or '882 patents at trial. (Tr. at 1728.) Third, Smith & Nephew's speculation as to what might happen during a future reexamination of the '882 and '536 patents does not rebut the presumption that the examiners involved in those proceedings will conduct independent analyses of those patents and the prior art.

B. ArthroCare's Alleged Conduct During The '536 Reexamination Cannot Render The '592 Or '882 Patents Unenforceable

Smith & Nephew's second argument is that ArthroCare's failure to provide Smith & Nephew's litigation-related documents in the '536 reexamination renders the '592 and '882 patents unenforceable because those documents provide information concerning prior art references that are material to the '592 and '882 patents. (D.I. 442 at 39.) Acts of alleged inequitable conduct related to the '536 reexamination, however, cannot "infect" the previously-issued '592 and '882 patents. *See SSIH Equip. S.A. v. United States Int'l Trade Comm'n*, 718 F.2d 365, 378-79 (Fed. Cir. 1983) (finding no infectious unenforceability where allegedly "infected" patent issued three years *before* the prosecutions in which inequitable conduct occurred had commenced); *Dayco*, 329 F.3d at 1366 n.4 (finding no inequitable conduct because patent issued two months before alleged improper act). In addition, the alleged failure to disclose Smith & Nephew's litigation-related documents during the '536 reexamination is

those of claims 45 and 63 are identical.

The recited elements of the claim 1 "system" for use with a high frequency power supply and an electrically conducting fluid supply include an electrosurgical probe, a return electrode, and a fluid delivery element. The probe comprises a shaft having proximal and distal ends, an electrode terminal disposed near the distal end of the shaft, and a connector near the proximal end of the shaft. The connector electrically couples the electrode terminal to the electrosurgical power supply, whereas the return

patent reads as follows:

21. A biopsy needle for use with a tissue sampling device having a housing with a forward end, a first slide mounted for longitudinal motion within said housing, and a second slide mounted for longitudinal motion within said housing, said biopsy needle comprising:

Id. at 1229. The Court noted that:

M3 Systems has incorrectly construed the claim preamble. A preamble may serve a variety of purposes, depending on its content. It may limit the scope of the claim, for example when patentability depends on limitations stated in the preamble, as in In re Stencel, 828 F.2d 751, 754, 4 USPQ2d 1071, 1073 (Fed.Cir. 1987), or when the preamble contributes to the definition of the claimed invention, as in Bell Communications Research, Inc. v. Vitalink Communications Corp., 55 F.3d 615, 620, 34 USPQ2d 1816, 1820 (Fed.Cir. 1995). In this case, however, the preamble simply states the intended use or purpose of the invention, as in Loctite Corp. v. Ultraseal Ltd., 781 F.2d 861, 868, 228 USPQ 90, 94 (Fed. Cir. 1985). Such a preamble usually does not limit the scope of the claims unless the preamble provides antecedents for ensuing claim terms and limits the claim accordingly. In Vaupel Textilmaschinen KG v. Meccanica Euro Italia S.P.A., 944 F.2d 870, 880, 20 USPQ2d 1045, 1053 (Fed.Cir. 1991), for example, the preamble described a "reference point" that provided guidance in understanding and construing the claim.

In the case at bar, the preamble of claim 21 recites the portion and structure of the gun housing into which the needle fit, and provides reference points in the gun that aid in defining the needles as set forth in the body of the claim. M3 Systems is incorrect in stating that the preamble must contain details of the integrated mechanical cocking structure, for the gun structure is not part of the separate claims to the needles. The question of anticipation of the '056 claims relates to the needles, not the gun.

an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 23 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 2, lines 42-68; col. 3, line 66.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 23 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 2, lines 42-68; col. 3, lines 34-38.

Swain et al.

The '536 Patent	Reference No. 24
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 24 discloses a high frequency power supply, see, e.g., p. 1425.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 24 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 1425.
an electrode terminal disposed near the distal end, and	Reference No. 24 discloses an electrode terminal disposed near the distal end, see, e.g., p. 1425.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 24 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 1425.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 24 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 1425.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 24 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., p. 1425.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 24 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., p. 1425.

Ramsay et al.

The '536 Patent	Reference No. 25
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 25 discloses a high frequency power supply, see, e.g., p. 99.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 25 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 99.
an electrode terminal disposed near the distal end, and	Reference No. 25 discloses an electrode terminal disposed near the distal end, see, e.g., p. 99.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 25 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 99.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 25 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 99.
an electrically conducting fluid supply for directing	Reference No. 25 discloses an electrically

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P. 23

that	conducting fluid to the target site, see, e.g., col. 3, lines 48-53.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 27 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 3, lines 48-53.

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The '536 Patent	Reference No. 28
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 28 discloses a high frequency power supply, see, e.g., col. 2, lines 23-33.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 28 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., col. 2, lines 23-33.
an electrode terminal disposed near the distal end, and	Reference No. 28 discloses an electrode terminal disposed near the distal end, see, e.g., col. 2, lines 23-33.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 28 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., col. 2, lines 23-33.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 28 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., col. 2, lines 23-33.
an electrically conducting fluid supply for directing electrically conducting fluid to the target site such that	Reference No. 28 discloses an electrically conducting fluid supply for directing electrically conducting fluid to the target site, see, e.g., col. 2, line 18.
the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal.	In Reference No. 28 the electrically conducting fluid generates a current flow path between the return electrode and the electrode terminal, see, e.g., col. 2, line 18.

Anger et al

The '536 Patent	Reference No. 29
45. An electrosurgical system for applying electrical energy to a target site on a structure within or on a patient's body, the system comprising:	
a high frequency power supply;	Reference No. 29 discloses a high frequency power supply, see, e.g., p. 67-68.
an electrosurgical probe comprising a shaft having a proximal end and a distal end,	Reference No. 29 discloses an electrosurgical probe comprising a shaft having a proximal end and a distal end, see, e.g., p. 67-68.
an electrode terminal disposed near the distal end, and	Reference No. 29 discloses an electrode terminal disposed near the distal end, see, e.g., p. 67-68.
a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply;	Reference No. 29 discloses a connector near the proximal end of the shaft electrically coupling the electrode terminal to the electrosurgical power supply, see, e.g., p. 67-68.
a return electrode electrically coupled to the electrosurgical power supply; and	Reference No. 29 discloses a return electrode electrically coupled to the electrosurgical power supply, see, e.g., p. 67-68.
an electrically conducting fluid supply for directing	Reference No. 29 discloses an electrically